SAMPLE SEARCH INITIATED 09:44:43 FILE 'REGISTRY'
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SEARCH TIME: 00.00.01

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L2 6 SEA SSS SAM L1

L3 11 L2

=> DIS L3 1- IBIB HITSEQ
YOU HAVE REQUESTED DATA FROM 11 ANSWERS - CONTINUE? Y/(N):Y
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=> DIS L3 1- TI HIT IBIB IABS
YOU HAVE REQUESTED DATA FROM 11 ANSWERS - CONTINUE? Y/(N):Y
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L3 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
TI Enzymatic synthesis of the enantiomers of 2-Amino-2-methyl-4-phosphonobutyric acid
IT 103-80-0, Phenylacetyl chloride 78405-44-4, 2-Amino-2-methyl-4-phosphonobutanoic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(enzymic synthesis of enantiomers of 2-amino-2-methyl-4-phosphonobutyric acid)
ACCESSION NUMBER: 2004:997619 CAPLUS
DOCUMENT NUMBER: 142:240508
TITLE: Enzymatic synthesis of the enantiomers of 2-Amino-2-methyl-4-phosphonobutyric acid
AUTHOR(S): Ragulin, V. V.
CORPORATE SOURCE: Institute of Physiologically Active Compounds, Russian Academy of Sciences, Chernogolovka, Russia
SOURCE: Russian Journal of General Chemistry (Translation of Zhurnal Obshchei Khimii) (2004), 74(8), 1297-1299
CODEN: RJGCEK; ISSN: 1070-3632
PUBLISHER: MAIK Nauka/Interperiodica Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:240508
ABSTRACT:
Enantiomers of (HO)2P(O)CH2CH2CMe(NH2)CO2H were obtained by penicillinamidase-catalyzed hydrolysis of (HO)2P(O)CH2CH2CMe(NHC(O)CH2Ph)CO2H (1), which favors hydrolysis of the (S)-isomer. The carboxamide 1 was prepared from racemic (HO)2P(O)CH2CH2CMe(NH2)CO2H by N- and O-silylation using (Me3Si)2NH followed by N-acylation using BnC(O)Cl and O-deprotection.

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
TI Synthesis of phosphinic acids on the basis of hypophosphites: IV. Synthesis of pseudo-γ-glutamylglycine and its enantiomers
IT 38056-67-6P 351904-41-1P, DL-[3-Amino-3-(hydroxycarbonyl)propyl][2-(hydroxycabonyl)ethyl]phosphinic acid 352359-46-7P 856766-88-6P 856766-89-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(asym. synthesis of pseudo-γ-glutamylglycine phosphinic acid pseudopeptides via penicillamidase catalyzed hydrolysis)

ACCESSION NUMBER: 2004:997594 CAPLUS
DOCUMENT NUMBER: 143:97611
TITLE: Synthesis of phosphinic acids on the basis of hypophosphites: IV. Synthesis of pseudo-γ-glutamylglycine and its enantiomers
AUTHOR(S): Ragulin, V. V.
CORPORATE SOURCE: Institute of Physiologically Active Compounds, Russian Academy of Sciences, Chernogolovka, Russia
SOURCE: Russian Journal of General Chemistry (Translation of Zhurnal Obshchei Khimii) (2004), 74(8), 1177-1181
CODEN: RJGCEK; ISSN: 1070-3632
PUBLISHER: MAIK Nauka/Interperiodica Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English
ABSTRACT:
A new method for construction of pseudopeptide mols. was proposed, exemplified by the synthesis of DL-[3-amino-3-(hydroxycarbonyl)propyl][2-(hydroxycabonyl)ethyl]phosphinic acid (I) (pseudo-γ-glutamylglycine), starting from ammonium hypophosphite. Enzymic synthesis using immobilized penicillamidase allowed preparation of the enantiomers of I.

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
TI Synthesis of a novel class of α,α-disubstituted amino acids: α-alkyl-γ-phosphonoglutamic acids
IT 663943-11-1P 663943-13-3P 663943-15-5P 663943-16-6P 663943-17-7P 663943-19-9P 663943-23-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of α-alkyl-γ-phosphonoglutamic acids)

ACCESSION NUMBER: 2003:509546 CAPLUS
DOCUMENT NUMBER: 140:217969
TITLE: Synthesis of a novel class of α,α-disubstituted amino acids: α-alkyl-γ-phosphonoglutamic acids
AUTHOR(S): Olczak, Jacek; Olma, Anna; Owczarz, Malgorzata; Krawczyk, Henryk; Zabrocki, Janusz
CORPORATE SOURCE: Institute of Organic Chemistry, Technical University of Lodz, Lodz, 90-924, Pol.
SOURCE: Peptides 2000, Proceedings of the European Peptide Symposium, 26th, Montpellier, France, Sept. 10-15, 2000 (2001), Meeting Date 2000, 379-380. Editor(s): Martinez, Jean; Fehrentz, Jean-Alain. Editions EDK: Paris, Fr.
CODEN: 69EDWK; ISBN: 2-84254-048-4
DOCUMENT TYPE: Conference
LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:217969
ABSTRACT:
A symposium report. A novel class of glutamic acid analogs containing both

α-substituent and α-phosphono functionality was synthesized via alkylation of α-amino acid derived 2-phenyl-4-alkyl-5(4H)-oxazolones by tri-Et 2-phosphonoacrylate. Subsequent ring opening in acidic conditions releases the α-carboxylic group and allows for all remaining functionalities to be still protected. The phosphono group could be selectively deprotected by means of trimethylsilyl bromide without affecting other functional groups.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
TI Conservation of the ligand recognition site of metabotropic glutamate receptors during evolution
IT 56-86-0, L-Glutamic acid, biological studies 2552-55-8, Ibotenic acid 2686-70-6, L-Homocysteine sulfinate 3106-85-2 14857-77-3, L-Homocysteic acid 52809-07-1, Quisqualic acid 78405-44-4 85148-82-9, S-4-Carboxy-3-hydroxyphenylglycine 111900-31-3, 1S,3S-ACPD 111900-32-4, 1S,3R-ACPD 117857-93-9, L-CCG-I 146669-29-6, RS-α-Methyl-4-carboxyphenylglycine 147782-19-2, DCG-IV 157141-16-7 169209-63-6 169209-65-8, α-Methyl-4-phosphonophenylglycine 169209-66-9 170984-70-0 170984-72-2 176199-48-7, LY 354740 177188-14-6 279684-29-6D, stereoisomer II
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(metabotropic glutamate receptors ligand-binding site conservation during evolution)
ACCESSION NUMBER: 2000:236781 CAPLUS
DOCUMENT NUMBER: 133:69122
TITLE: Conservation of the ligand recognition site of metabotropic glutamate receptors during evolution
AUTHOR(S): Parmentier, M.-L.; Galvez, T.; Acher, F.; Peyre, B.; Pellicciari, R.; Grau, Y.; Bockaert, J.; Pin, J.-P.
CORPORATE SOURCE: Centre INSERM-CNRS de Pharmacologie-Endocrinologie, UPR 9023-CNRS, Montpellier, 34094, Fr.
SOURCE: Neuropharmacology (2000), 39(7), 1119-1131
CODEN: NEPHBW; ISSN: 0028-3908
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
ABSTRACT:
Mammalian metabotropic glutamate receptors (mGluRs) are classified into 3 groups based on their sequence similarity and ligand recognition selectivity. Recently, we identified a Drosophila mGluR (DmGluAR) which is about equidistant, phylogenetically, from the 3 mGluR groups. However, both the G-protein coupling selectivity and the pharmacol. profile of DmGluAR, as analyzed with mutated G-proteins and a few compds., look similar to those of mammalian group-II mGluRs. In the present study we carefully examined the pharmacol. profile of DmGluAR, and compared it to those of the rat mGlu1a, mGlu2 and mGlu4a receptors, representative of group-I, II and III resp. The pharmacol. profile of DmGluAR was found to be similar to that of mGlu2R, and only very small differences could be identified at the level of their pharmacophore models. These data strongly suggest that the binding sites of these two receptors are similar. To further document this idea, a 3D model of the mGlu2 binding domain was constructed based on the low sequence similarity with periplasmic amino acid binding proteins, and was used to identify the residues that possibly constitute the ligand recognition pocket. Interestingly, this putative binding pocket was found to be very well conserved between DmGluAR and the mammalian group-II receptors. These data indicate that there has been a strong selective pressure during evolution to maintain the ligand recognition selectivity of mGluRs.

REFERENCE COUNT: 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
TI Structure-function relationships for analogs of L-2-amino-4-phosphonobutanoic acid on the quisqualic acid-sensitive AP4 receptor of the rat hippocampus
IT 407-41-0, O-Phospho-L-serine 4378-43-2 5652-28-8 13138-33-5 23052-81-5 73913-63-0, O-Phospho-D-serine 74265-32-0 78405-44-4 78739-01-2 78944-89-5 79055-67-7 79055-68-8 79469-41-3 80902-11-0, .dbldag.O-Methylphosphonyl-L-serine 81338-23-0 81338-24-1 90632-40-9 90632-41-0 103439-17-4 103439-18-5 116139-40-3 133753-34-1 133753-35-2 143152-37-8 143235-21-6 143235-22-7 144030-86-4
RL: BIOL (Biological study)
(quisqualic acid-sensitive AP4 receptor binding by, in CA1 hippocampus, structure in relation to)

ACCESSION NUMBER: 1992:584255 CAPLUS
DOCUMENT NUMBER: 117:184255
TITLE: Structure-function relationships for analogs of L-2-amino-4-phosphonobutanoic acid on the quisqualic acid-sensitive AP4 receptor of the rat hippocampus
AUTHOR(S): Schulte, Marvin K.; Whittemore, Edward R.; Koerner, James F.; Johnson, Rodney L.
CORPORATE SOURCE: Med. Sch., Univ. Minnesota, Minneapolis, MN, 55455, USA
SOURCE: Brain Research (1992), 582(2), 291-8
CODEN: BRREAP; ISSN: 0006-8993
DOCUMENT TYPE: Journal
LANGUAGE: English
ABSTRACT:

Hippocampal CA1 pyramidal cell neurons are sensitized to depolarization by L-2-amino-4-phosphonobutanoic acid (L-AP4) following exposure to L-quisqualic acid (QUIS). The authors examined the interaction of 43 structural analogs of L-AP4 with both the 'induction' site and the QUIS-sensitive AP4 site in rat hippocampus. The synthesis of cis- and trans-4-phosphonoxy-L-proline, 3-(RS)-amino-5-phosphonopentanoic acid and 2(RS)-amino-5-phenyl-4(RS)-phosphonopentanoic acid (γ-benzyl AP4) are described. None of the test compds. interact with the induction site; thus L-QUIS remains the only compound known to induce this effect. However, one compound (L-2-amino-3-(5-tetrazolyl)-propanoic acid (L-aspartate tetrazole) 'pre-blocked' and reversed the effects of QUIS. In addition, the potency of 16 analogs increased more than 4-fold following exposure of slices to L-QUIS. Among these, L-AP4, L-AP5, 2-amino-4-(methylphosphino)butanoic acid (AMPB), and E-1(RS)-amino-3(RS)-phosphonocyclopentanecarboxylic acid (E-cyclopentyl AP4) displayed IC50 values of less than 0.100 mM after QUIS. The results presented here suggest that the QUIS-sensitive AP4 site requires a spatial configuration of functional groups similar to that present in E-cyclopentyl AP4. The presence of a primary amino group and a phosphorus-containing group (either monoanionic or dianionic) appear to be required, however, a carboxyl group is essential for interaction. The pharmacol. of the QUIS-sensitive AP4 site suggests that it is distinct from other known binding sites for L-AP4 in the central nervous system.

L3 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
TI Antagonist activity of methyl-substituted analogs of 2-amino-4-phosphonobutanoic acid in the hippocampal slice
AB Four monomethyl-substituted analogs of 2-amino-4-phosphonobutanoic acid (APB) [23052-81-5] an antagonist of excitatory pathways in the central nervous system, were prepared to investigate the steric requirements of the APB receptor. Me groups were incorporated at the amino, α-, β-, and γ-positions. The β- [95742-06-6] and γ-methyl-substituted analog [79469-40-2] of APB were moderately potent antagonists in excitatory synapses to the hippocampal perforant

path, as judged by extracellular recording techniques, whereas the N- [96249-46-6] and α-methyl-substituted analog [78405-44-4] had much lower potencies. All of these APB analogs had very low potencies in the Schaffer collateral pathway. The APB receptors in the perforant path displayed more tolerance of methyl-substitution at the β- and γ-positions of APB than at the amino or α-positions in this system.

IT 78405-44-4 79469-40-2 79469-41-3 95742-06-6
RL: BIOL (Biological study)
(hippocampus synaptic neurotransmission inhibition by, mol. structure in relation to)

ACCESSION NUMBER: 1985:198188 CAPLUS
DOCUMENT NUMBER: 102:198188
TITLE: Antagonist activity of methyl-substituted analogs of 2-amino-4-phosphonobutanoic acid in the hippocampal slice
AUTHOR(S): Crooks, Stephen L.; Freund, Ronald K.; Halsrud, David A.; Koerner, James F.; Johnson, Rodney L.
CORPORATE SOURCE: Coll. Pharm., Univ. Minnesota, Minneapolis, MN, 55455, USA
SOURCE: Brain Research (1985), 329(1-2), 346-9
CODEN: BRREAP; ISSN: 0006-8993
DOCUMENT TYPE: Journal
LANGUAGE: English
ABSTRACT:
Four monomethyl-substituted analogs of 2-amino-4-phosphonobutanoic acid (APB) [23052-81-5] an antagonist of excitatory pathways in the central nervous system, were prepared to investigate the steric requirements of the APB receptor. Me groups were incorporated at the amino, α-, β-, and γ-positions. The β- [95742-06-6] and γ-methyl-substituted analog [79469-40-2] of APB were moderately potent antagonists in excitatory synapses to the hippocampal perforant path, as judged by extracellular recording techniques, whereas the N- [96249-46-6] and α-methyl-substituted analog [78405-44-4] had much lower potencies. All of these APB analogs had very low potencies in the Schaffer collateral pathway. The APB receptors in the perforant path displayed more tolerance of methyl-substitution at the β- and γ-positions of APB than at the amino or α-positions in this system.

L3 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
TI Displacement of DL-[3H]-2-amino-4-phosphonobutanoic acid ([3H]APB) binding with methyl-substituted APB analogs and glutamate agonists
AB The binding of DL-2-amino-4-phosphonobutanoic acid (I) [20263-07-4] to rat brain synaptic membranes was saturable (Kd = 6.0 μM; Bmax = 380 pmol/mg/protein), Ca2+- and Cl--dependent, and diminished upon freezing the membrane preparation The L-isomer of I [23052-81-5], L-glutamic acid [56-86-0], and L-aspartic acid [56-84-8] were more potent as displacers of I binding than the resp. D-isomers. With the exception of kynurenic acid [492-27-3], all the other compds. examined (L- and D-glutamic acid [6893-26-1], L-glutamate tetrazole [65914-80-9], D-2-amino-5-phosphonopentanoic acid [79055-68-8], 2(RS)-amino-2-methyl-4-phosphonobutenoic acid [78405-44-4], DL-2-amino-4-(methylphosphino)butenoic acid [53369-07-6], 2(RS)-amino-3(RS)-methyl-4-phosphonobutanoic acid [95742-06-6], and 2(RS)-amino-4(RS)-phosphonopentanoic acid [79469-40-2]) were more potent as displacers of I binding than as inhibitors of synaptic transmission in the lateral perforant path; however, the L-isomer of I was equipotent in both assays. The ligand specificity in binding to the I site is discussed in relation to the regulation of the lateral perforant pathway and the pharmacol. of glutamate receptors.
IT 56-84-8, biological studies 56-86-0, biological studies 487-79-6 492-27-3 1783-96-6 6893-26-1 51276-47-2 52809-07-1 65914-80-9

78405-44-4 79055-68-8 79469-40-2 95742-06-6
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(aminophosphonobutanoate binding to brain response to)

ACCESSION NUMBER: 1985:197823 CAPLUS
DOCUMENT NUMBER: 102:197823
TITLE: Displacement of DL-[3H]-2-amino-4-phosphonobutanoic acid ([3H]APB) binding with methyl-substituted APB analogs and glutamate agonists
AUTHOR(S): Robinson, Michael B.; Crooks, Stephen L.; Johnson, Rodney L.; Koerner, James F.
CORPORATE SOURCE: Med. Sch., Univ. Minnesota, Minneapolis, MN, 55455, USA
SOURCE: Biochemistry (1985), 24(10), 2401-5
CODEN: BICHAW; ISSN: 0006-2960
DOCUMENT TYPE: Journal
LANGUAGE: English
ABSTRACT:
The binding of DL-2-amino-4-phosphonobutanoic acid (I) [20263-07-4] to rat brain synaptic membranes was saturable (Kd = 6.0 μM; Bmax = 380 pmol/mg/protein), Ca2+- and Cl--dependent, and diminished upon freezing the membrane preparation The L-isomer of I [23052-81-5], L-glutamic acid [56-86-0], and L-aspartic acid [56-84-8] were more potent as displacers of I binding than the resp. D-isomers. With the exception of kynurenic acid [492-27-3], all the other compds. examined (L- and D-glutamic acid [6893-26-1], L-glutamate tetrazole [65914-80-9], D-2-amino-5-phosphonopentanoic acid [79055-68-8], 2(RS)-amino-2-methyl-4-phosphonobutenoic acid [78405-44-4], DL-2-amino-4-(methylphosphino)butenoic acid [53369-07-6], 2(RS)-amino-3(RS)-methyl-4-phosphonobutanoic acid [95742-06-6], and 2(RS)-amino-4(RS)-phosphonopentanoic acid [79469-40-2]) were more potent as displacers of I binding than as inhibitors of synaptic transmission in the lateral perforant path; however, the L-isomer of I was equipotent in both assays. The ligand specificity in binding to the I site is discussed in relation to the regulation of the lateral perforant pathway and the pharmacol. of glutamate receptors.

L3 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
TI Synthesis and properties of phosphinothricin derivatives
IT 89916-00-7D, diester
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with tribenzylhexahydrotriazine)

ACCESSION NUMBER: 1984:174931 CAPLUS
DOCUMENT NUMBER: 100:174931
TITLE: Synthesis and properties of phosphinothricin derivatives
AUTHOR(S): Maier, Ludwig; Rist, Guenter; Lea, Peter J.
CORPORATE SOURCE: Agric. Div., Ciba-Geigy Ltd., Basel, Switz.
SOURCE: Phosphorus and Sulfur and the Related Elements (1983), 18(1-2-3), 349-52
CODEN: PREEDF; ISSN: 0308-664X
DOCUMENT TYPE: Journal
LANGUAGE: English
ABSTRACT:
Michaelis-Aruzov reaction of ClCH2CH2P(OEt)2 with RX [R = H, MeOCH2, HO2CCH2, HO2CCH(NH2)CH2CH2, PhCH2, p-BrC6H4CH2], followed by treatment with (acylamino)malonates gave phosphinothricin derivs., RP(O)(OH)CH2CH(NH2)CO2H (I). I with different substituents on the N atom were obtained by base-catalyzed addition of substituted aminomalonates with Me vinylphosphinates, followed by hydrolysis. Also prepared was the isomer MeP(O)(OH)CH2CH(CO2H)CH2NH2. I were purified by silylation with (Me3Si)2NH, followed by distillation and hydrolysis.

L3 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
TI Organic phosphorus compounds. 76. Synthesis and properties of phosphinothricin derivatives
IT 89222-43-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactions of)

ACCESSION NUMBER: 1984:121198 CAPLUS
DOCUMENT NUMBER: 100:121198
TITLE: Organic phosphorus compounds. 76. Synthesis and properties of phosphinothricin derivatives
AUTHOR(S): Maier, Ludwig; Lea, Peter J.
CORPORATE SOURCE: Agric. Div., Ciba-Geigy Ltd., Basel, Switz.
SOURCE: Phosphorus and Sulfur and the Related Elements (1983), 17(1), 1-19
CODEN: PREEDF; ISSN: 0308-664X
DOCUMENT TYPE: Journal
LANGUAGE: English

ABSTRACT:
Six phosphinothricin derivs. RP(O)(OH)CH2CH2CH(NH2)CO2H (R = substituted benzyl, HO2CCH2, MeOCH2) were prepared by Michaelis-Arbuzov reaction of Cl(CH2)2P(OEt)2 with RX (same R; X = halide) to give RP(O)(OEt)CH2CH2Cl, dehydrochlorination of the last with Et3N to give vinylphosphinates RP(O)(OEt)CH:CH2, treatment of the last with AcNHCH(CO2Et)2, followed by hydrolysis in concentrated HCl. Also, seven MeP(O)(OH)CH2CH2CH(NRR1)CO2H [R = Me, 3,4-ClMeC6H3, R1 = CH2Ph, H; RR1 = (CH2)n (n = 4, 5, 6), (CH2)2CHMe(CH2)2, (CH2)2O(CH2)2] were prepared by base-catalyzed addition of MeP(O)(OMe)CH:CH2 with RNR1CH(CO2Et)2, followed by hydrolysis. The activity of some of the phosphinothricin analogs as glutamine synthetase inhibitors and contact herbicides is reported.

L3 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
TI Inhibition of rat liver glutamine synthetase by phosphonic analogs of glutamic acid
IT 56-85-9D, phosphonic analogs 56-86-0D, phosphonic analogs 6323-99-5
18865-31-1 51276-47-2 65482-86-2 73870-68-5 73870-69-6
78405-44-4 78405-48-8 78432-42-5 81746-56-7 115692-97-2
153605-27-7
RL: BIOL (Biological study)
(glutamine synthetase inhibition by)

ACCESSION NUMBER: 1981:457044 CAPLUS
DOCUMENT NUMBER: 95:57044
TITLE: Inhibition of rat liver glutamine synthetase by phosphonic analogs of glutamic acid
AUTHOR(S): Lejczak, B.; Starzemska, H.; Mastalerz, P.
CORPORATE SOURCE: Inst. Org. Phys. Chem., Tech. Univ., Wroclaw, PL-50370, Pol.
SOURCE: Experientia (1981), 37(5), 461-2
CODEN: EXPEAM; ISSN: 0014-4754
DOCUMENT TYPE: Journal
LANGUAGE: English

ABSTRACT:
Analogs of glutamic acid, α-methylglutamic acid, and glutamine in which the α- or γ-COOH groups are replaced by PO3H2 or P(O)(OH3)OH groups competitively inhibit rat liver glutamine synthetase. The Ki values are comparable to or lower than Km for L-glutamate.

L3 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
TI Cytostatic activity in vitro of cycloleucine, aspartic acid and glutamic acid phosphonic analogs
IT 52-52-8 5652-28-8 5652-40-4 6323-99-5 18865-31-1 51276-47-2
52112-12-6 61341-13-7 61341-14-8 67398-11-2 67550-64-5

229

67550-65-6 67550-68-9 67550-69-0 73870-68-5 73870-71-0
75878-71-6 78405-44-4
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(cytostatic activity of)

ACCESSION NUMBER: 1981:140 CAPLUS
DOCUMENT NUMBER: 94:140
TITLE: Cytostatic activity in vitro of cycloleucine, aspartic acid and glutamic acid phosphonic analogs
AUTHOR(S): Dus, Danuta; Salwa, Jan; Mastalerz, Przemyslaw
CORPORATE SOURCE: Inst. Immunol. Exp. Therapy, Polish Acad. Sci., Wroclaw, Pol.
SOURCE: Archivum Immunologiae et Therapiae Experimentalis (1980), 28(3), 433-8
CODEN: AITEAT; ISSN: 0004-069X
DOCUMENT TYPE: Journal
LANGUAGE: English
ABSTRACT:
Cytostatic activity of 18 new phosphonic acid derivative of cycloleucine, aspartic acid, and glutamic acid was tested against human KB and mouse L1210s leukemia cell lines in vitro. Four of the tested compds. revealed their cytostatic activity at 10 μg/mL.

=> FIL REGISTRY

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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
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FIDE - All substance data, except sequence data
IDE - FIDE, but only 50 names
SQIDE - IDE, plus sequence data
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used
SQD - Protein sequence data, includes RN
SQD3 - Same as SQD, but 3-letter amino acid codes are used
SQN - Protein sequence name information, includes RN

CALC - Table of calculated properties
EPROP - Table of experimental properties
PROP - EPROP and CALC

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APPS -- Application and Priority Information
BIB -- CA Accession Number, plus Bibliographic Data
CAN -- CA Accession Number
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)
IND -- Index Data
IPC -- International Patent Classification
PATS -- PI, SO
STD -- BIB, IPC, and NCL

IABS -- ABS, indented, with text labels
IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.
The MAX format is the same as ALL.
The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.
HELP FORMATS -- To see detailed descriptions of the predefined formats.
ENTER DISPLAY FORMAT (IDE):END

=> DIS L2 1- RN SAM
'SAM' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats

are: (RN = CAS Registry Number)

REG - RN
SAM - Index Name, MF, and structure - no RN
FIDE - All substance data, except sequence data
IDE - FIDE, but only 50 names
SQIDE - IDE, plus sequence data
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used
SQD - Protein sequence data, includes RN
SQD3 - Same as SQD, but 3-letter amino acid codes are used
SQN - Protein sequence name information, includes RN

CALC - Table of calculated properties
EPROP - Table of experimental properties
PROP - EPROP and CALC

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ABS -- Abstract
APPS -- Application and Priority Information
BIB -- CA Accession Number, plus Bibliographic Data
CAN -- CA Accession Number
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)
IND -- Index Data
IPC -- International Patent Classification
PATS -- PI, SO
STD -- BIB, IPC, and NCL

IABS -- ABS, indented, with text labels
IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.
The MAX format is the same as ALL.
The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.
HELP FORMATS -- To see detailed descriptions of the predefined formats.
ENTER DISPLAY FORMAT (IDE):END

=> FIL CAPLUS

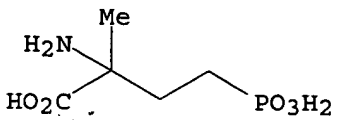
COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.88	36.68
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-8.25

FILE 'CAPLUS' ENTERED AT 09:47:14 ON 18 JUL 2006

FILE COVERS 1907 - 18 Jul 2006 VOL 145 ISS 4
FILE LAST UPDATED: 17 Jul 2006 (20060717/ED)

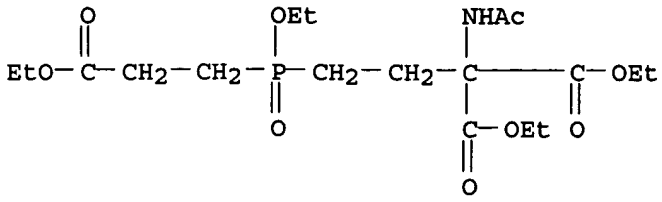
=> DIS L3 1 HITSEQ
THE ESTIMATED COST FOR THIS REQUEST IS 7.05 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L3 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
IT 78405-44-4, 2-Amino-2-methyl-4-phosphonobutanoic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(enzymic synthesis of enantiomers of 2-amino-2-methyl-4-phosphonobutyric acid)
RN 78405-44-4 CAPLUS
CN Isovaline, 4-phosphono- (9CI) (CA INDEX NAME)



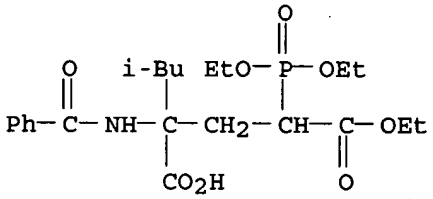
=> DIS L3 2 HITSEQ
THE ESTIMATED COST FOR THIS REQUEST IS 7.05 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L3 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
IT 856766-89-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(asym. synthesis of pseudo-γ-glutamylglycine phosphinic acid pseudopeptides via penicillamidase catalyzed hydrolysis)
RN 856766-89-7 CAPLUS
CN Propanedioic acid, (acetylamino)[2-[ethoxy(3-ethoxy-3-oxopropyl)phosphinyl]ethyl]-, diethyl ester (9CI) (CA INDEX NAME)



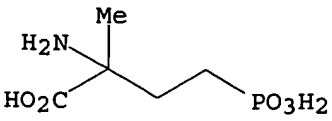
=> DIS L3 3 HITSEQ
THE ESTIMATED COST FOR THIS REQUEST IS 7.05 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L3 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
IT 663943-17-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of α-alkyl-γ-phosphonoglutamic acids)
RN 663943-17-7 CAPLUS
CN Glutamic acid, N-benzoyl-4-(diethoxyphosphinyl)-2-(2-methylpropyl)-, 5-ethyl ester (9CI) (CA INDEX NAME)



=> DIS L3 4 HITSEQ
THE ESTIMATED COST FOR THIS REQUEST IS 7.05 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L3 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
IT 78405-44-4
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(metabotropic glutamate receptors ligand-binding site conservation during evolution)
RN 78405-44-4 CAPLUS
CN Isovaline, 4-phosphono- (9CI) (CA INDEX NAME)

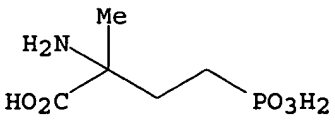


=> DIS L3 5 HITSEQ
THE ESTIMATED COST FOR THIS REQUEST IS 7.05 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L3 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN

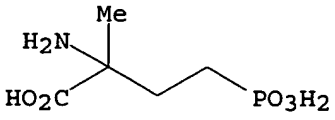
229

IT 78405-44-4
RL: BIOL (Biological study)
(quisqualic acid-sensitive AP4 receptor binding by, in CA1 hippocampus, structure in relation to)
RN 78405-44-4 CAPLUS
CN Isovaline, 4-phosphono- (9CI) (CA INDEX NAME)



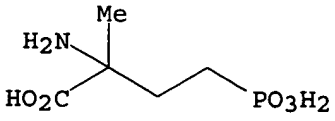
=> DIS L3 6 HITSEQ
THE ESTIMATED COST FOR THIS REQUEST IS 7.05 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L3 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
IT 78405-44-4
RL: BIOL (Biological study)
(hippocampus synaptic neurotransmission inhibition by, mol. structure in relation to)
RN 78405-44-4 CAPLUS
CN Isovaline, 4-phosphono- (9CI) (CA INDEX NAME)



=> DIS L3 7 HITSEQ
THE ESTIMATED COST FOR THIS REQUEST IS 7.05 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L3 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
IT 78405-44-4
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(aminophosphonobutanoate binding to brain response to)
RN 78405-44-4 CAPLUS
CN Isovaline, 4-phosphono- (9CI) (CA INDEX NAME)

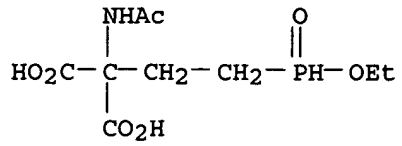


=> DIS L3 8 HITSEQ
THE ESTIMATED COST FOR THIS REQUEST IS 7.05 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L3 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN

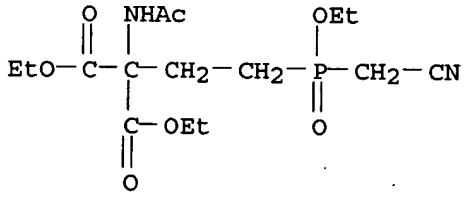
229

IT 89916-00-7D, diester
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with tribenzylhexahydrotriazine)
RN 89916-00-7 CAPLUS
CN Propanedioic acid, (acetylamino)[2-(ethoxyphosphinyl)ethyl]- (9CI) (CA INDEX NAME)



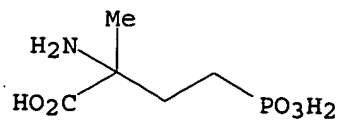
=> DIS L3 9 HITSEQ
THE ESTIMATED COST FOR THIS REQUEST IS 7.05 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L3 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
IT 89222-43-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactions of)
RN 89222-43-5 CAPLUS
CN Propanedioic acid, (acetylamino)[2-[(cyanomethyl)ethoxyphosphinyl]ethyl]-, diethyl ester (9CI) (CA INDEX NAME)



=> DIS L3 10 HITSEQ
THE ESTIMATED COST FOR THIS REQUEST IS 7.05 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L3 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
IT 78405-44-4
RL: BIOL (Biological study)
(glutamine synthetase inhibition by)
RN 78405-44-4 CAPLUS
CN Isovaline, 4-phosphono- (9CI) (CA INDEX NAME)

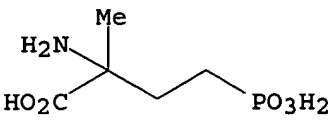


=> DIS L3 11 HITSEQ
THE ESTIMATED COST FOR THIS REQUEST IS 7.05 U.S. DOLLARS

229

DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L3 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
IT 78405-44-4
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(cytostatic activity of)
RN 78405-44-4 CAPLUS
CN Isovaline, 4-phosphono- (9CI) (CA INDEX NAME)



=> logoff
ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF
LOGOFF? (Y)/N/HOLD:y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	26.99	63.67

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-8.25

STN INTERNATIONAL LOGOFF AT 09:48:28 ON 18 JUL 2006

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Dialog level 05.12.03D

Last logoff:  12jul06 16:08:22
Logon file001 17jul06 15:25:21
           *** ANNOUNCEMENTS ***
                     ***
NEW FILES RELEASED
***Trademarkscan - South Korea (File 655)
***Regulatory Affairs Journals (File 183)
***Index Chemicus (File 302)
***Inspec (File 202)

RESUMED UPDATING
***File 141, Reader's Guide Abstracts
                     ***
RELOADS COMPLETED
***File 516, D&B--Dun's Market Identifiers
***File 523, D&B European Dun's Market Identifiers
***File 531, American Business Directory
*** MEDLINE has been reloaded with the 2006 MeSH (Files 154 & 155)
*** The 2005 reload of the CLAIMS files (Files 340, 341, 942)
is now available online.
                                  ***
DATABASES REMOVED
***File 196, FINDEX
***File 468, Public Opinion Online (POLL)

Chemical Structure Searching now available in Prous Science Drug
Data Report (F452), Prous Science Drugs of the Future (F453),
IMS R&D Focus (F445/955), Pharmaprojects (F128/928), Beilstein
Facts (F390), Derwent Chemistry Resource (F355) and Index Chemicus
(File 302).
                     ***
 >>>For the latest news about Dialog products, services, content<<<
 >>>and events, please visit What's New from Dialog at <<<
 >>>http://www.dialog.com/whatsnew/.  You can find news about<<<
 >>>a specific database by entering HELP NEWS <file number>.<<<
* * *

File   1:ERIC 1966-2006/June
       (c) format only 2006 Dialog

      Set  Items  Description
      ---  -----  -----------
Cost is in DialUnits
?
Terminal set to DLINK
? b 5
       17jul06 15:25:49 User291213 Session D64.1
            $0.39    0.112 DialUnits File1
     $0.39  Estimated cost File1
     $0.11  TELNET
     $0.50  Estimated cost this search
     $0.50  Estimated total session cost   0.112 DialUnits


File   5:Biosis Previews(R) 1969-2006/Jul W2
       (c) 2006 The Thomson Corporation

      Set  Items  Description
      ---  -----  -----------
```

```
? s cyclodextrin?(S)(tocopherol or (vitamin(W)E)
>>>Unmatched parentheses
? s cyclodextrin?(S)(tocopherol or (vitamin(W)E))
            9950  CYCLODEXTRIN?
           16552  TOCOPHEROL
          122584  VITAMIN
          766074  E
           24086  VITAMIN(W)E
      S1      20  CYCLODEXTRIN?(S)(TOCOPHEROL OR (VITAMIN(W)E))
? rd
      S2      20  RD  (unique items)
? t s2/free/all
```

2/6/1

0015320770 BIOSIS NO.: 200510015270

Solubilization of tocopherols by using cyclization reaction with cyclodextrin glucanotransferase

2005

2/6/2

0015211361 BIOSIS NO.: 200500117539

Xanthophylls and alpha-tocopherol decrease UVB-induced lipid peroxidation and stress signaling in human lens epithelial cells

2004

2/6/3

0014949525 BIOSIS NO.: 200400320282

Uptake and transport of high-density lipoprotein (HDL) and HDL-associated alpha-tocopherol by an in vitro blood-brain barrier model

2004

2/6/4

0014914408 BIOSIS NO.: 200400285165

Lutein and zeaxanthin decrease UVB-induced stress signaling in human lens epithelial cells

2004

2/6/5

0014807806 BIOSIS NO.: 200400178563

Solubilizing excipients in oral and injectable formulations.

2004

2/6/6

0014614795 BIOSIS NO.: 200300583514

Antioxidant activities of natural vitamin E formulations.

2003

2/6/7

0014424517 BIOSIS NO.: 200300381794

Use of cyclodextrin **as a vehicle for loading human lens epithelial and human ciliary body cells with xanthophylls and alpha-** tocopherol.

2003

2/6/8
0014358463 BIOSIS NO.: 200300317182
Action of pyrethrum-based formulations against grain weevils.
2003

2/6/9
0013655657 BIOSIS NO.: 200200249168
Development and validation of oxygen radical absorbance capacity assay for lipophilic antioxidants using randomly methylated beta-cyclodextrin as the solubility enhancer
2002

2/6/10
0013568114 BIOSIS NO.: 200200161625
Modulation of human lymphocyte proliferative response with aging
2002

2/6/11
0012678971 BIOSIS NO.: 200000397284
Oxidation of d-alpha-tocopherol in aqueous solution. Formation of colored products
1999

2/6/12
0012530379 BIOSIS NO.: 200000248692
Kinetic behavior of three preparations of alpha-tocopherol after oral administration to postpubertal heifers
2000

2/6/13
0012330032 BIOSIS NO.: 200000048345
Cis/trans isomers of tocotrienols: Occurrence and bioavailability
1999

2/6/14
0011634276 BIOSIS NO.: 199800428523
Oxidative damage induced by the fullerene C60 on photosensitization in rat liver microsomes
1998

2/6/15
0011466418 BIOSIS NO.: 199800260665
Neurotoxicity of cholesterol oxides on cultured cerebellar granule cells
1998

2/6/16
0011441586 BIOSIS NO.: 199800235833
Neurotoxicity of 25-OH-cholesterol on sympathetic neurons
1998

2/6/17

0011344881 BIOSIS NO.: 199800139128
Neurotoxicity of 25-OH-cholesterol on NGF-differentiated PC12 cells
1998

2/6/18
0011175699 BIOSIS NO.: 199799809759
Comparison of the separation of fat-soluble vitamins using beta-cyclodextrins in high-performance liquid chromatography and micellar electrokinetic chromatography
1997

2/6/19
0009156985 BIOSIS NO.: 199497178270
Bitterness-suppressive formulation of benexate hydrochloride betadex prepared by hot melt granulation
1993

2/6/20
0006780276 BIOSIS NO.: 198988095391
SUPPRESSION OF FISHY ODOR IN SARDINE MEAT
1989
```
? s s2 and skin
              20  S2
          250312  SKIN
      S3       0  S2 AND SKIN
? s s2 and (derma$ or sunscreen)
              20  S2
               0  DERMA$
            1754  SUNSCREEN
      S4       0  S2 AND (DERMA$ OR SUNSCREEN)
? sf all
>>>SELECT FILES not supported.
? b 411
       17jul06 15:29:56 User291213 Session D64.2
            $5.80    0.982 DialUnits File5
               $0.00  20 Type(s) in Format  6
            $0.00  20 Types
     $5.80  Estimated cost File5
     $1.33  TELNET
     $7.13  Estimated cost this search
     $7.63  Estimated total session cost   1.095 DialUnits

File 411:DIALINDEX(R)

DIALINDEX(R)
   (c) 2006 Dialog

*** DIALINDEX search results display in an abbreviated ***
*** format unless you enter the SET DETAIL ON command. ***
? sf all
   You have 562 files in your file list.
   (To see banners, use SHOW FILES command)
? s cyclodextrin?(S)(tocopherol or (vitamin(W)E))

Your SELECT statement is:
   s cyclodextrin?(S)(tocopherol or (vitamin(W)E))
```

```
    Items   File
    -----   ----
       20     5: Biosis Previews(R)_1969-2006/Jul W2
        1     7: Social SciSearch(R)_1972-2006/Jul W2
        1     8: Ei Compendex(R)_1970-2006/Jul W2
        4     9: Business & Industry(R)_Jul/1994-2006/Jul 14
        2    10: AGRICOLA_70-2006/May
        1    13: BAMP_2006/Jul W2
        3    15: ABI/Inform(R)_1971-2006/Jul 17
        6    16: Gale Group PROMT(R)_1990-2006/Jul 14
        3    20: Dialog Global Reporter_1997-2006/Jul 17
        4    24: CSA Life Sciences Abstracts_1966-2006/May
       29    34: SciSearch(R) Cited Ref Sci_1990-2006/Jul W2
        1    35: Dissertation Abs Online_1861-2006/Jun
        7    50: CAB Abstracts_1972-2006/Jun
        8    51: Food Sci.&Tech.Abs_1969-2006/Jul W2
       10    53: FOODLINE(R): Science_1972-2006/Jul 12
Examined  50 files
        1    67: World Textiles_1968-2006/Jul
       10    71: ELSEVIER BIOBASE_1994-2006/Jul W3
       18    73: EMBASE_1974-2006/Jul 17
        4    74: Int.Pharm.Abs_1970-2006/May B2
        1    79: Foods Adlibra(TM)_1974-2002/Apr
        1    88: Gale Group Business A.R.T.S._1976-2006/Jul 05
       12    94: JICST-EPlus_1985-2006/Apr W3
        4    95: TEME-Technology & Management_1989-2006/Jul W3
        2   112: UBM Industry News_1998-2004/Jan 27
Examined 100 files
        1   135: NewsRx Weekly Reports_1995-2006/Jul W2
       12   144: Pascal_1973-2006/Jun W4
        3   148: Gale Group Trade & Industry DB_1976-2006/Jul 14
       16   155: MEDLINE(R)_1950-2006/Jul 17
        8   156: ToxFile_1965-2006/Jul W2
        3   159: Cancerlit_1975-2002/Oct
        3   162: Global Health_1983-2006/Jun
        1   172: EMBASE Alert_2006/Jul 17
        2   180: Federal Register_1985-2006/Jul 14
        1   203: AGRIS_1974-2006/Mar
Examined 150 files
        3   240: PAPERCHEM_1967-2006/Jul W3
        1   248: PIRA_1975-2006/Jun W4
        1   266: FEDRIP_2005/Dec
        2   280: ONTAP Derwent World Patents Index
Examined 200 files
        1   285: BioBusiness(R)_1985-1998/Aug W1
        1   302: INDEX CHEMICUS_1993-200628
        2   305: Analytical Abstracts_1980-2006/Jul W1
        1   315: ChemEng & Biotec Abs_1970-2006/Jun
        1   319: Chem Bus NewsBase_1984-2006/Jul 17
       70   324: German Patents Fulltext_1967-200627
        1   331: Derwent WPI First View    UD=200645
       32   340: CLAIMS(R)/US Patent_1950-06/Jul 13
       10   342: Derwent Patents Citation Indx_1978-05/200641
        2   344: Chinese Patents Abs_Jan 1985-2006/Jan
        5   345: Inpadoc/Fam.& Legal Stat_1968-2006/UD=200628
       38   347: JAPIO_Dec 1976-2005/Dec(Updated 060404)
      108   348: EUROPEAN PATENTS_1978-2006/ 200628
      489   349: PCT FULLTEXT_1979-2006/UB=20060713,UT=20060706
        1   355: Derwent Chemistry Resource_UD=200642
        3   357: Derwent Biotech Res._1982-2006/Jul W2
        1   358: Current BioTech Abs_1983-2006/Jan
```

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       Examined 250 files
              20   377: Derwent Drug File_1983-2006/Jun W3
               2   390: Beilstein Abstracts_2006/Q2
               2   391: Beilstein Reactions_2006/Q2
               4   393: Beilstein Abstracts_2006/Q2
               7   398: Chemsearch_1957-2006/Jun
              37   399: CA SEARCH(R)_1967-2006/UD=14504
              30   440: Current Contents Search(R)_1990-2006/Jul 17
               1   446: IMS New Product Focus_1982-2006/May
       Examined 300 files
               1   484: Periodical Abs Plustext_1986-2006/Jul W2
       Examined 350 files
               3   570: Gale Group MARS(R)_1984-2006/Jul 14
       Examined 400 files
               2   613: PR Newswire_1999-2006/Jul 17
               1   619: Asia Intelligence Wire_1995-2006/Jul 16
               3   636: Gale Group Newsletter DB(TM)_1987-2006/Jul 14
Processing
            1268   654: US Pat.Full._1976-2006/Jul 13
       Examined 450 files
       Examined 500 files
               3   763: Freedonia Market Res._1990-2006/Jul
               2   764: BCC Market Research_1989-2006/Jul
               2   766: (R)Kalorama Info Market Res._1993-2000/Aug
       Examined 550 files
               1   990: NewsRoom Current_Mar 1 -2006/Jul 17
               4   992: NewsRoom 2005
               2   993: NewsRoom 2004
               3   996: NewsRoom 2000-2001

   76 files have one or more items; file list includes 562 files.

? b 34 348 349 324 654
       17jul06 15:35:40 User291213 Session D64.3
           $36.24   13.674 DialUnits File411
    $36.24  Estimated cost File411
     $1.60  TELNET
    $37.84  Estimated cost this search
    $45.47  Estimated total session cost  14.769 DialUnits


SYSTEM:OS  - DIALOG OneSearch
  File  34:SciSearch(R) Cited Ref Sci 1990-2006/Jul W2
        (c) 2006 The Thomson Corp
  File 348:EUROPEAN PATENTS 1978-2006/ 200628
        (c) 2006 European Patent Office
*File 348: For important information about IPCR/8 and forthcoming
changes to the IC= index, see HELP NEWSIPCR.
  File 349:PCT FULLTEXT 1979-2006/UB=20060713,UT=20060706
        (c) 2006 WIPO/Univentio
*File 349: For important information about IPCR/8 and forthcoming
changes to the IC= index, see HELP NEWSIPCR.
  File 324:German Patents Fulltext 1967-200627
        (c) 2006 Univentio
*File 324: For important information about IPCR/8 and forthcoming
changes to the IC= index, see HELP NEWS IPCR.
  File 654:US Pat.Full. 1976-2006/Jul 13
        (c) Format only 2006 Dialog
*File 654: IPCR/8 classification codes now searchable in 2006 records.
For information about IC= index changes, see HELP NEWSIPCR.
```

```
      Set  Items  Description
      ---  -----  -----------
? s cyclodextrin?(S)(tocopherol or (vitamin(W)E))
Processing
Processing
           60796  CYCLODEXTRIN?
           50305  TOCOPHEROL
          180876  VITAMIN
         6614735  E
           59100  VITAMIN(W)E
      S1    1964  CYCLODEXTRIN?(S)(TOCOPHEROL OR (VITAMIN(W)E))
? s s1 and (skin or derm$ or sunscreen)
            1964  S1
          661253  SKIN
               0  DERM$
           12620  SUNSCREEN
      S2    1447  S1 AND (SKIN OR DERM$ OR SUNSCREEN)
? s (cyclodextrin?(S)(tocopherol or (vitamin(W)E)) NEAR(5) complex)
>>>Invalid syntax
? s (cyclodextrin?(S)(tocopherol or (vitamin(W)E))NEAR(5)complex)
>>>Invalid syntax
? s (cyclodextrin?(S)(tocopherol or (vitamin(W)E))(W)complex)
Processing
Processing
           60796  CYCLODEXTRIN?
           50305  TOCOPHEROL
          180876  VITAMIN
         6614735  E
           59100  VITAMIN(W)E
         2212806  COMPLEX
      S3       3  (CYCLODEXTRIN?(S)(TOCOPHEROL OR (VITAMIN(W)E))(W)COMPLEX)
? t s3/free/all
>>>"FREE" is not a valid format name in file(s): 324, 348-349, 654
? t s3/3,k/all

 3/3,K/1     (Item 1 from file: 324)
DIALOG(R)File 324:German Patents Fulltext
(c) 2006 Univentio. All rts. reserv.

0003943877    **Image available**
2:1-Komplex aus beta- oder gamma-Cyclodextrin und alpha-Tocopherol
Patent Applicant/Assignee:
  WACKER CHEMIE GMBH, DE
Inventor(s):
  KUPKA MICHAELA, DE
Patent and Priority Information (Country, Number, Date):
  Patent:               DE 10200657 A1 20030724
  Application:          DE 10200657 20020110
  Priority Application: DE 10200657 20020110  (DE 10200657)
Publication Language: German
Fulltext Word Count (English): 4520
Fulltext Word Count (German) : 4181
Fulltext Word Count (Both)   : 8701

Fulltext Availability:
  Description (English machine translation)

Description (English machine translation)
...  1 complex is to be recognized clearly.
  Color of the complexes after 8 months
```

Ss- **Cyclodextrin** /- **Tocopherol complex** ; 1: 1; light yellow colouring; Ss- **Cyclodextrin** /- **Tocopherol complex** ; 2: 1; almost knows; physical mixturesss- **Cyclodextrin** /-Tocopherol 2: 1 intensive yellow colouring; physical mixtures ss- **Cyclodextrin** /-Tocopherol 1: 1 intensive yellow colouring.

Example 5

Determination of the stability in storage of...

...with 50oC

Manufacture a cream with 0,2% -Tocopherol content in a 1:1 -Cyclodextrin/- **Tocopherol complex**

0.4167 g of a -Cyclodextrin/-Tocopherol of complex 1: 1 (24% -Tocopherol) with 24...

...HPLC was examined.
Manufacture a cream with 0,2% -Tocopherol content in 2: 1 -Cyclodextrin/- **Tocopherol complex**

0.769 g of a -Cyclodextrin/-Tocopherol of complex 2: 1 (13% Tocopherol) with 24...

3/3,K/2 (Item 1 from file: 654)
DIALOG(R)File 654:US Pat.Full.

0005653927 **IMAGE Available
Derwent Accession: 2004-432837
Cosmetic composition comprising a complex of cyclodextrin and vitamin F
Inventor: Regiert, Marlies, INV
Kupka, Michaela, INV
Assignee: Wacker-Chemie GmbH(03), Munich, DE
Correspondence Address: WILLIAM COLLARD COLLARD & ROE, P.C., 1077 NORTHERN BOULEVARD, ROSLYN, NY, 11576, US

	Publication Number	Kind	Date	Application Number	Filing Date
Main Patent	US 20040096413	A1	20040520	US 2003712703	20031112
Priority				DE 10253042	20021114

Fulltext Word Count: 7083

Non-exemplary or Dependent Claim(s):
...chloride; 59.0% by weight of water; 1.5% by weight of [small gamma, Greek]- **cyclodextrin** -[small alpha, Greek]- **tocopherol complex** ; and 4.0% by weight of [small alpha, Greek]- **cyclodextrin** -linoleic acid complex; and and wherein each percent by weight is based upon the total...

...weight of water; 1.70% by weight of [small gamma, Greek]-cyclodextrin-[small alpha, Greek]- **tocopherol complex** ; 2.40% by weight of [small alpha, Greek]- **cyclodextrin** -linoleic acid complex; 0.05% by weight of methylchloroisothiazolinone; and 0.30% by weight of...

3/3,K/3 (Item 2 from file: 654)
DIALOG(R)File 654:US Pat.Full.

0005289174 **IMAGE Available
Derwent Accession: 2004-106475
2:1 Complex of beta- or gamma-cyclodextrin and alpha-tocopherol
Inventor: Marlies Regiert, INV
Michaela Kupka, INV
Assignee: WACKER-CHEMIE GmbH(03)
Correspondence Address: COLLARD & ROE, P.C., 1077 Northern Boulevard, Roslyn, NY, 11576, US

	Publication Number	Kind	Date	Application Number	Filing Date
Main Patent	US 20030130231	A1	20030710	US 2002323019	20021219
Priority				DE 10200657	20020110

Fulltext Word Count: 6349

Description of the Invention:
...0093] [small beta, Greek]- **Cyclodextrin** /[small alpha, Greek]- **tocopherol complex** 1:1 slight yellowing...
...0094] [small beta, Greek]-cyclodextrin/[small alpha, Greek]- **tocopherol complex** 2:1 virtually white physical mixtures of [small beta, Greek]- **cyclodextrin** /[small alpha, Greek]-tocopherol 2:1 intensive yellowing...

...Storage Stability of the [small gamma, Greek]-Cyclodextrin/[small alpha, Greek]- **Tocopherol Complex** in a Cream at RT and at 50 degree C...

...alpha, Greek]-Tocopherol Content in a 1:1 [small gamma, Greek]-Cyclodextrin/[small alpha, Greek]- **Tocopherol Complex**

[...

...0121] 0.4167 g of a [small gamma, Greek]-cyclodextrin/[small alpha, Greek]- **tocopherol complex** 1:1 (24% [small alpha, Greek]-tocopherol) were dispersed with 24.7251 g of water...

...alpha, Greek]-Tocopherol Content in a 2:1 [small gamma, Greek]-Cyclodextrin/[small alpha, Greek]- **Tocopherol Complex** :

[...

...0123] 0.769 g of a [small gamma, Greek]-cyclodextrin/[small alpha, Greek]- **tocopherol complex** 2:1 (13% [small alpha, Greek]-tocopherol) were dispersed with 24.579 g of water
? cost
17jul06 15:42:02 User291213 Session D64.4
$6.03 0.257 DialUnits File34
$6.03 Estimated cost File34
$4.49 0.829 DialUnits File348
$4.49 Estimated cost File348
$6.17 1.300 DialUnits File349
$6.17 Estimated cost File349
$3.74 0.748 DialUnits File324

```
            $1.70  1 Type(s) in Format  3
          $1.70  1 Types
    $5.44  Estimated cost File324
         $19.91    3.374 DialUnits File654
            $1.40  2 Type(s) in Format  3
          $1.40  2 Types
   $21.31  Estimated cost File654
          OneSearch, 5 files,  6.508 DialUnits FileOS
    $1.86  TELNET
   $45.30  Estimated cost this search
   $90.77  Estimated total session cost  21.277 DialUnits

? logoff
      17jul06 15:42:34 User291213 Session D64.4
          $6.03    0.257 DialUnits File34
    $6.03  Estimated cost File34
          $4.49    0.829 DialUnits File348
    $4.49  Estimated cost File348
          $6.17    1.300 DialUnits File349
    $6.17  Estimated cost File349
          $3.74    0.748 DialUnits File324
            $1.70  1 Type(s) in Format  3
          $1.70  1 Types
    $5.44  Estimated cost File324
         $19.91    3.374 DialUnits File654
            $1.40  2 Type(s) in Format  3
          $1.40  2 Types
   $21.31  Estimated cost File654
          OneSearch, 5 files,  6.508 DialUnits FileOS
    $1.86  TELNET
   $45.30  Estimated cost this search
   $90.77  Estimated total session cost  21.277 DialUnits

Logoff: level 05.12.03 D  15:42:34

You are now logged off
```

```
            37   654: US Pat.Full._1976-2006/Jul 13
       Examined 450 files
       Examined 500 files
              1   745: Investext(R) PDF Index_1999--2006/Jul W3
       Examined 550 files

   93 files have one or more items; file list includes 562 files.
   One or more terms were invalid in 226 files.

? b 5 73 35 34 144 155 24 440 357 162
       18jul06 14:24:21 User291213 Session D65.2
           $11.07    4.179 DialUnits File411
    $11.07  Estimated cost File411
     $2.40  TELNET
    $13.47  Estimated cost this search
    $14.44  Estimated total session cost   4.416 DialUnits


SYSTEM:OS  - DIALOG OneSearch
  File   5:Biosis Previews(R) 1969-2006/Jul W2
         (c) 2006 The Thomson Corporation
  File  73:EMBASE 1974-2006/Jul 18
         (c) 2006 Elsevier Science B.V.
  File  35:Dissertation Abs Online 1861-2006/Jun
         (c) 2006 ProQuest Info&Learning
  File  34:SciSearch(R) Cited Ref Sci 1990-2006/Jul W2
         (c) 2006 The Thomson Corp
  File 144:Pascal 1973-2006/Jun W4
         (c) 2006 INIST/CNRS
  File 155:MEDLINE(R) 1950-2006/Jul 17
         (c) format only 2006 Dialog
  File  24:CSA Life Sciences Abstracts 1966-2006/May
         (c) 2006 CSA.
  File 440:Current Contents Search(R) 1990-2006/Jul 18
         (c) 2006 The Thomson Corp
  File 357:Derwent Biotech Res. _1982-2006/Jul W2
         (c) 2006 The Thomson Corp.
  File 162:Global Health 1983-2006/Jun
         (c) 2006 CAB International

      Set  Items  Description
      ---  -----  -----------
? s au=((horwitz, M?) or (Horwitz M?))
            243  AU=HORWITZ, M?
           2286  AU=HORWITZ M?
      S1   2529  AU=((HORWITZ, M?) OR (HORWITZ M?))
? s s1 and mycobacterium
           2529  S1
         280867  MYCOBACTERIUM
      S2    443  S1 AND MYCOBACTERIUM
? s s2 and (methionine or sulfoximine or phosphinothricin or glutamine)
            443  S2
         219111  METHIONINE
          19889  SULFOXIMINE
           3621  PHOSPHINOTHRICIN
         154190  GLUTAMINE
      S3     82  S2 AND (METHIONINE OR SULFOXIMINE OR PHOSPHINOTHRICIN OR
                 GLUTAMINE)
? s s3 and anti(3n)bacter?
Processing
Processing
```

Processing
Processed 10 of 10 files ...
Completed processing all files
82 S3
2439789 ANTI
5374442 BACTER?
174052 ANTI(3N)BACTER?
S4 2 S3 AND ANTI(3N)BACTER?
? t s4/free/all

4/8/1 (Item 1 from file: 155)
DIALOG(R)File 155:(c) format only 2006 Dialog. All rts. reserv.

14116641 PMID: 12496196
Inhibition of Mycobacterium **tuberculosis** glutamine **synthetase as a novel antibiotic strategy against tuberculosis: demonstration of efficacy in vivo.**
Jan 2003
Descriptors: ***Anti - Bacterial** Agents--therapeutic use--TU; *Antitubercular Agents--therapeutic use--TU; *Glutamate-Ammonia Ligase --antagonists and inhibitors--AI; * **Methionine Sulfoximine** --therapeutic use--TU; * **Mycobacterium** tuberculosis--drug effects--DE; *Tuberculosis, Pulmonary--drug therapy--DT; Animals; **Anti - Bacterial** Agents --pharmacology--PD; Antitubercular Agents--pharmacology--PD; Colony Count, Microbial; Disease Models, Animal; Drug Synergism; Guinea Pigs; Humans; Isoniazid--therapeutic use--TU; Lung--microbiology--MI; **Methionine Sulfoximine** --pharmacology--PD; Microbial Sensitivity Tests; **Mycobacterium** tuberculosis--enzymology--EN; Research Support, U.S. Gov't, P.H.S.; Spleen--microbiology--MI; Tuberculosis, Pulmonary--microbiology--MI
CAS Registry No.: 0 (Anti-Bacterial Agents); 0 (Antitubercular Agents) ; 1982-67-8 (Methionine Sulfoximine); 54-85-3 (Isoniazid)
Enzyme No.: EC 6.3.1.2 (Glutamate-Ammonia Ligase)

4/8/2 (Item 2 from file: 155)
DIALOG(R)File 155:(c) format only 2006 Dialog. All rts. reserv.

12380229 PMID: 10224282
An inhibitor of exported Mycobacterium **tuberculosis** glutamine **synthetase selectively blocks the growth of pathogenic mycobacteria in axenic culture and in human monocytes: extracellular proteins as potential novel drug targets.**
May 3 1999
Descriptors: *Glutamate-Ammonia Ligase--antagonists and inhibitors--AI; *Monocytes--microbiology--MI; * **Mycobacterium** tuberculosis --growth and development--GD; Aminobutyric Acids--pharmacology--PD; Animals; **Anti - Bacterial** Agents--pharmacology--PD; Cell Wall--metabolism--ME; Drug Synergism; Enzyme Inhibitors--pharmacology--PD; Extracellular Space; Glutamic Acid--metabolism--ME; Humans; **Methionine Sulfoximine** --pharmacology--PD; Monocytes--drug effects--DE; **Mycobacterium** tuberculosis--drug effects--DE; Peptidoglycan--metabolism--ME; Polyglutamic Acid--metabolism--ME; Research Support, U.S. Gov't, P.H.S.; Sheep
CAS Registry No.: 0 (Aminobutyric Acids); 0 (Anti-Bacterial Agents); 0 (Enzyme Inhibitors); 0 (Peptidoglycan); 1982-67-8 (Methionine Sulfoximine); 25513-46-6 (Polyglutamic Acid); 51276-47-2 (phosphinothricin); 56-86-0 (Glutamic Acid)
Enzyme No.: EC 6.3.1.2 (Glutamate-Ammonia Ligase)
? t s4/3,k/all

4/3,K/1 (Item 1 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

14116641 PMID: 12496196
Inhibition of Mycobacterium **tuberculosis** glutamine **synthetase as a novel antibiotic strategy against tuberculosis: demonstration of efficacy in vivo.**
Harth Gunter; **Horwitz Marcus A**
Department of Medicine, School of Medicine, University of California, Los Angeles, California 90095-1688, USA.
Infection and immunity (United States) Jan 2003, 71 (1) p456-64, ISSN 0019-9567--Print Journal Code: 0246127
Contract/Grant No.: AI42925; AI; NIAID
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Inhibition of Mycobacterium **tuberculosis** glutamine **synthetase as a novel antibiotic strategy against tuberculosis: demonstration of efficacy in vivo.**
Harth Gunter; **Horwitz Marcus A**
... humankind's greatest killers, and new therapeutic strategies are needed to combat the causative agent, **Mycobacterium** tuberculosis, which is rapidly developing resistance to conventional antibiotics. Using the highly demanding guinea pig model of pulmonary tuberculosis, we have investigated the feasibility of inhibiting M. tuberculosis **glutamine** synthetase (GS), an enzyme that plays a key role in both nitrogen metabolism and cell...

... by aerosol with the highly virulent Erdman strain of M. tuberculosis, the GS inhibitor L- **methionine** -SR- **sulfoximine** (MSO) protected the animals against weight loss, a hallmark of tuberculosis, and against the growth...
Descriptors: ***Anti - Bacterial** Agents--therapeutic use--TU; *Antitubercular Agents--therapeutic use--TU; *Glutamate-Ammonia Ligase --antagonists and inhibitors--AI; * **Methionine Sulfoximine** --therapeutic use--TU; * **Mycobacterium** tuberculosis--drug effects--DE; *Tuberculosis, Pulmonary--drug therapy--DT; Animals; **Anti - Bacterial** Agents --pharmacology--PD; Antitubercular Agents--pharmacology--PD; Colony Count, Microbial; Disease Models, Animal; Drug Synergism; Guinea Pigs; Humans; Isoniazid--therapeutic use--TU; Lung--microbiology--MI; **Methionine Sulfoximine** --pharmacology--PD; Microbial Sensitivity Tests; **Mycobacterium** tuberculosis--enzymology--EN; Research Support, U.S. Gov't, P.H.S.; Spleen--microbiology--MI...
Chemical Name: **Anti - Bacterial** Agents; Antitubercular Agents; **Methionine Sulfoximine** ; Isoniazid; Glutamate-Ammonia Ligase

4/3,K/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

12380229 PMID: 10224282
An inhibitor of exported Mycobacterium **tuberculosis** glutamine **synthetase selectively blocks the growth of pathogenic mycobacteria in axenic culture and in human monocytes: extracellular proteins as potential novel drug targets.**
Harth G; **Horwitz M A**

Department of Medicine, University of California at Los Angeles School of Medicine, Los Angeles, California 90095, USA.
Journal of experimental medicine (UNITED STATES) May 3 1999, 189 (9) p1425-36, ISSN 0022-1007--Print Journal Code: 2985109R
Contract/Grant No.: AI 31338; AI; NIAID; AI 42925; AI; NIAID
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

An inhibitor of exported Mycobacterium **tuberculosis** glutamine **synthetase selectively blocks the growth of pathogenic mycobacteria in axenic culture and in human monocytes...**

Harth G; **Horwitz M A**

Mycobacterium tuberculosis and other pathogenic mycobacteria export abundant quantities of proteins into their extracellular milieu when growing either axenically or within phagosomes of host cells. One major extracellular protein, the enzyme **glutamine** synthetase, is of particular interest because of its link to pathogenicity. Pathogenic mycobacteria, but not...

...Interestingly, export of the enzyme is associated with the presence of a poly-L-glutamate/ **glutamine** structure in the mycobacterial cell wall. In this study, we investigated the influence of **glutamine** synthetase inhibitors on the growth of pathogenic and nonpathogenic mycobacteria and on the poly-L-glutamate/ **glutamine** cell wall structure. The inhibitor L- **methionine** -S- **sulfoximine** rapidly inactivated purified M. tuberculosis **glutamine** synthetase, which was 100-fold more sensitive to this inhibitor than a representative mammalian **glutamine** synthetase. Added to cultures of pathogenic mycobacteria, L- **methionine** - S- **sulfoximine** rapidly inhibited extracellular **glutamine** synthetase in a concentration-dependent manner but had only a minimal effect on cellular **glutamine** synthetase, a finding consistent with failure of the drug to cross the mycobacterial cell wall. Remarkably, the inhibitor selectively blocked the growth of pathogenic mycobacteria, all of which release **glutamine** synthetase extracellularly, but had no effect on nonpathogenic mycobacteria or nonmycobacterial microorganisms, none of which release **glutamine** synthetase extracellularly. The inhibitor was also bacteriostatic for M. tuberculosis in human mononuclear phagocytes (THP...

... perhaps underlying its bacteriostatic effect, the inhibitor markedly reduced the amount of poly-L-glutamate/ **glutamine** cell wall structure in M. tuberculosis. Although it is possible that **glutamine** synthetase inhibitors interact with additional extracellular proteins or structures, our findings support the concept that...

Descriptors: *Glutamate-Ammonia Ligase--antagonists and inhibitors--AI; *Monocytes--microbiology--MI; * **Mycobacterium** tuberculosis --growth and development--GD; Aminobutyric Acids--pharmacology--PD; Animals; **Anti - Bacterial** Agents--pharmacology--PD; Cell Wall--metabolism--ME; Drug Synergism; Enzyme Inhibitors--pharmacology--PD; Extracellular Space; Glutamic Acid--metabolism--ME; Humans; **Methionine Sulfoximine** --pharmacology--PD; Monocytes--drug effects--DE; **Mycobacterium** tuberculosis--drug effects--DE; Peptidoglycan--metabolism--ME; Polyglutamic Acid--metabolism--ME; Research Support, U.S...
Chemical Name: Aminobutyric Acids; **Anti - Bacterial** Agents; Enzyme Inhibitors; Peptidoglycan; **Methionine Sulfoximine** ; Polyglutamic Acid; **phosphinothricin** ; Glutamic Acid; Glutamate-Ammonia Ligase
? ds

```
Set     Items   Description
S1       2529   AU=((HORWITZ, M?) OR (HORWITZ M?))
S2        443   S1 AND MYCOBACTERIUM
S3         82   S2 AND (METHIONINE OR SULFOXIMINE OR PHOSPHINOTHRICIN OR G-
               LUTAMINE)
S4          2   S3 AND ANTI(3N)BACTER?
? s s3 and (glutamine()synth?)
Processing
Processing
Processed  10 of  10 files ...
Completed processing all files
              82  S3
          154190  GLUTAMINE
         5910402  SYNTH?
           32944  GLUTAMINE(W)SYNTH?
      S5      74  S3 AND (GLUTAMINE()SYNTH?)
? s s5 and py<2002
Processing
Processing
Processing
Processing
Processed  10 of  10 files ...
Completed processing all files
              74  S5
        77298337  PY<2002
      S6      39  S5 AND PY<2002
? rd
>>>Record 440:13075717 incomplete bibliographic data - record retained in RD
set
>>>Record 440:11242977 incomplete bibliographic data - record retained in RD
set
>>>Record 440:10551256 incomplete bibliographic data - record retained in RD
set
>>>Record 440:8796867 incomplete bibliographic data - record retained in RD
set
>>>Record 440:8141401 incomplete bibliographic data - record retained in RD
set
>>>Record 440:5801034 incomplete bibliographic data - record retained in RD
set
      S7      13  RD  (unique items)
? t s7/3,k/all
```

7/3,K/1 (Item 1 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

0013332249 BIOSIS NO.: 200100504088

High extracellular levels of Mycobacterium **tuberculosis** glutamine synthetase **and superoxide dismutase in actively growing cultures are due to high expression and extracellular stability rather than to a protein-specific export mechanism**

AUTHOR: Tullius Michael V; Harth Gunter; **Horwitz Marcus A** (Reprint
AUTHOR ADDRESS: Division of Infectious Diseases, Department of Medicine, School of Medicine, UCLA, 10833 Le Conte Ave., CHS 37-121, Los Angeles, CA, 90095-1688, USA**USA

JOURNAL: Infection and Immunity 69 (10): p6348-6363 October, 2001 **2001**
MEDIUM: print
ISSN: 0019-9567
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

High extracellular levels of Mycobacterium **tuberculosis** glutamine synthetase **and superoxide dismutase in actively growing cultures are due to high expression and extracellular stability...**
...AUTHOR: **Horwitz Marcus A**
2001

ABSTRACT: **Glutamine synthetase** (GS) and superoxide dismutase (SOD), large multimeric enzymes that are thought to play important roles in the pathogenicity of **Mycobacterium** tuberculosis, are among the bacterium's major culture filtrate proteins in actively growing cultures. Although...

...of export, we cloned the homologous genes (glnA1 and sodA) from the rapid-growing, nonpathogenic **Mycobacterium** smegmatis, generated glnA1 and sodA mutants of M. smegmatis by allelic exchange, and quantitated expression...
...REGISTRY NUMBERS: **glutamine synthetase** ;
DESCRIPTORS:
...ORGANISMS: **Mycobacterium** smegmatis (Mycobacteriaceae...

... **Mycobacterium** tuberculosis (Mycobacteriaceae
CHEMICALS & BIOCHEMICALS: **glutamine synthetase** (GS...
GENE NAME: **Mycobacterium** tuberculosis glnA1 gene (Mycobacteriaceae...

... **Mycobacterium** tuberculosis sodA gene (Mycobacteriaceae

7/3,K/2 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0012384759 BIOSIS NO.: 200000103072
Treatment of Mycobacterium **tuberculosis with antisense oligonucleotides to** glutamine synthetase **mRNA inhibits** glutamine synthetase **activity, formation of the poly-L-glutamate/** glutamine **cell wall structure, and bacterial replication**
AUTHOR: Harth Gunter; Zamecnik Paul C; Tang Jin-Yan; Tabatadze David; **Horwitz Marcus A** (Reprint
AUTHOR ADDRESS: Division of Infectious Diseases, Department of Medicine, School of Medicine, University of California, 10833 Le Conte Avenue, 37-121 CHS, Los Angeles, CA, 90095, USA**USA
JOURNAL: Proceedings of the National Academy of Sciences of the United States of America 97 (1): p418-423 Jan. 4, 2000 **2000**
MEDIUM: print
ISSN: 0027-8424
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

Treatment of Mycobacterium **tuberculosis with antisense oligonucleotides to** glutamine synthetase **mRNA inhibits** glutamine synthetase **activity, formation of the poly-L-glutamate/** glutamine **cell wall structure, and bacterial replication**
...AUTHOR: **Horwitz Marcus A**
2000

ABSTRACT: New antibiotics to combat the emerging pandemic of drug-resistant strains of **Mycobacterium** tuberculosis are urgently needed. We have investigated the effects on M. tuberculosis of phosphorothioate-modified antisense oligodeoxyribonucleotides (PS-ODNs) against the mRNA of

glutamine synthetase , an enzyme whose export is associated with pathogenicity and with the formation of a poly-L-glutamate/ **glutamine** cell wall structure. Treatment of virulent M. tuberculosis with 10 muM antisense PS-ODNs reduced **glutamine synthetase** activity and expression by 25-50% depending on whether one, two, or three different PS ...

...specific target sites on the mRNA. Treatment with PS-ODNs of a recombinant strain of **Mycobacterium** smegmatis expressing M. tuberculosis **glutamine synthetase** selectively inhibited the recombinant enzyme but not the endogenous enzyme for which the mRNA transcript...

...M. tuberculosis with the antisense PS-ODNs also reduced the amount of poly-L-glutamate/ **glutamine** in the cell wall by 24%. Finally, treatment with antisense PS-ODNs reduced M. tuberculosis...

...ODNs) but had no effect on the growth of M. smegmatis, which does not export **glutamine synthetase** nor possess the poly-L-glutamate/ **glutamine** (P-L-glx) cell wall structure. The experiments indicate that the antisense PS-ODNs enter...
...REGISTRY NUMBERS: **glutamine synthetase**
DESCRIPTORS:
ORGANISMS: **Mycobacterium** smegmatis (Mycobacteriaceae...

... **Mycobacterium** tuberculosis (Mycobacteriaceae
CHEMICALS & BIOCHEMICALS: **glutamine synthetase** --...

... **glutamine synthetase** mRNA...

...poly-L-glutamate/ **glutamine** --

7/3,K/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0012014555 BIOSIS NO.: 199900274215
An inhibitor of exported Mycobacterium **tuberculosis** glutamine synthetase **selectively blocks the growth of pathogenic mycobacteria in axenic culture and in human monocytes: Extracellular proteins as potential novel drug targets**
AUTHOR: Harth Gunter; **Horwitz Marcus A** (Reprint
AUTHOR ADDRESS: Department of Medicine, 37-121 CHS, School of Medicine, University of California at Los Angeles, 10833 Le Conte Ave., Los Angeles, CA, 90095, USA**USA
JOURNAL: Journal of Experimental Medicine 189 (9): p1425-1435 May 3, 1999
1999
MEDIUM: print
ISSN: 0022-1007
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

An inhibitor of exported Mycobacterium **tuberculosis** glutamine synthetase **selectively blocks the growth of pathogenic mycobacteria in axenic culture and in human monocytes: Extracellular...**
...AUTHOR: **Horwitz Marcus A**
1999

ABSTRACT: **Mycobacterium** tuberculosis and other pathogenic mycobacteria export abundant quantities of proteins into their extracellular milieu when growing either axenically or within phagosomes of host cells. One major extracellular protein, the enzyme **glutamine synthetase** , is of particular interest because of its link to pathogenicity. Pathogenic mycobacteria, but not nonpathogenic...

...Interestingly, export of the enzyme is associated with the presence of a poly-L-glutamate/ **glutamine** structure in the mycobacterial cell wall. In this study, we investigated the influence of **glutamine synthetase** inhibitors on the growth of pathogenic and nonpathogenic mycobacteria and on the poly-L-glutamate/ **glutamine** cell wall structure. The inhibitor L-**methionine** -S- **sulfoximine** rapidly inactivated purified M. tuberculosis **glutamine synthetase** , which was 100-fold more sensitive to this inhibitor than a representative mammalian **glutamine synthetase** . Added to cultures of pathogenic mycobacteria, L- **methionine** -S- **sulfoximine** rapidly inhibited extracellular **glutamine synthetase** in a concentration-dependent manner but had only a minimal effect on cellular **glutamine synthetase** , a finding consistent with failure of the drug to cross the mycobacterial cell wall. Remarkably, the inhibitor selectively blocked the growth of pathogenic mycobacteria, all of which release **glutamine synthetase** extracellularly, but had no effect on nonpathogenic mycobacteria or nonmycobacterial microorganisms, none of which release **glutamine synthetase** extracellularly. The inhibitor was also bacteriostatic for M. tuberculosis in human mononuclear phagocytes (THP-1...

...perhaps underlying its bacteriostatic effect, the inhibitor markedly reduced the amount of poly-L-glutamate/ **glutamine** cell wall structure in M. tuberculosis. Although it is possible that **glutamine synthetase** inhibitors interact with additional extracellular proteins or structures, our findings support the concept that extracellular...
...REGISTRY NUMBERS: **glutamine** ; ...

... **glutamine** ; ...

... **glutamine synthetase** ; ...

...poly-L- **glutamine**
DESCRIPTORS:
...ORGANISMS: **Mycobacterium** tuberculosis (Mycobacteriaceae
CHEMICALS & BIOCHEMICALS: ... **glutamine** ; ...

... **glutamine synthetase** ; ...

...poly-L- **glutamine**

7/3,K/4 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0011125678 BIOSIS NO.: 199799759738
Expression and efficient export of enzymatically active Mycobacterium **tuberculosis** glutamine synthetase **in** Mycobacterium **smegmatis and evidence that the information for export is contained within the protein**
AUTHOR: Harth Gunter; **Horwitz Marcus A** (Reprint
AUTHOR ADDRESS: Div. Infect. Dis., Dep. Med., 37-121 CHS, Sch. Med., UCLA, 10883 Le Conte Ave., Los Angeles, CA 90095, USA**USA
JOURNAL: Journal of Biological Chemistry 272 (36): p22728-22735 1997 **1997**

ISSN: 0021-9258
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

Expression and efficient export of enzymatically active Mycobacterium **tuberculosis** glutamine synthetase **in** Mycobacterium **smegmatis and evidence that the information for export is contained within the protein**
...AUTHOR: **Horwitz Marcus A**
1997

ABSTRACT: We have investigated the expression and extracellular release of active, recombinant **Mycobacterium** tuberculosis **glutamine synthetase** (EC 6.3.1.2), an enzyme that is a potentially important determinant of M. tuberculosis infection and whose extracellular release is correlated with pathogenicity. The M. tuberculosis **glutamine synthetase** gene encodes a polypeptide of 478 amino acids; 12 such subunits comprise the active enzyme. Northern blot, nuclease S1, and primer extension analyses revealed **glutamine synthetase** specific transcripts of apprx 1,550 and 1,650 nucleotides produced under low and high nitrogen conditions, respectively. Expression of recombinant M. tuberculosis **glutamine synthetase** in Escherichia coli YMC21E, a **glutamine synthetase** deletion mutant, led to transcomplementation of the mutant but not to release of active enzyme. Expression in **Mycobacterium** smegmatis 1-2c, from the gene's own promoter, resulted in the release of gt 95% of all recombinant enzyme. No hybrid molecules containing M. tuberculosis and M. smegmatis **glutamine synthetase** subunits were detected. Native and recombinant exported and intracellular **glutamine synthetase** molecules were indistinguishable from one another by mass, N-terminal amino acid sequence, antibody reactivity, and enzymatic activity. Since M. tuberculosis **glutamine synthetase** is similar to other, strictly intracellular, bacterial **glutamine synthetases** and the DNA sequence upstream of the structural gene does not encode a leader peptide...
...REGISTRY NUMBERS: **GLUTAMINE SYNTHETASE** ;
DESCRIPTORS:
...ORGANISMS: **Mycobacterium** smegmatis (Mycobacteriaceae...

... **Mycobacterium** tuberculosis (Mycobacteriaceae)
CHEMICALS & BIOCHEMICALS: **GLUTAMINE SYNTHETASE** ;
MISCELLANEOUS TERMS: ... **GLUTAMINE SYNTHETASE** ; ...

... **GLUTAMINE SYNTHETASE** GENE

7/3,K/5 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0009694391 BIOSIS NO.: 199598162224
Characterization of Mycobacterium **tuberculosis** glutamine synthetase
AUTHOR: Harth Gunter; Clemens Daniel L; **Horwitz Marcus A**
AUTHOR ADDRESS: Dep. Med., Sch. Med., Univ. Calif., Los Angels, CA 90024, USA**USA
JOURNAL: Journal of Cellular Biochemistry Supplement 0 (19B): p68 1995
1995
CONFERENCE/MEETING: Keystone Symposium on Molecular Mechanisms in Tuberculosis Tamarron, Colorado, USA February 19-25, 1995; 19950219
ISSN: 0733-1959
DOCUMENT TYPE: Meeting; Meeting Abstract; Meeting Poster
RECORD TYPE: Citation

LANGUAGE: English

Characterization of Mycobacterium **tuberculosis** glutamine synthetase
...AUTHOR: **Horwitz Marcus A**
1995
...REGISTRY NUMBERS: **GLUTAMINE SYNTHETASE** ; ...

... **GLUTAMINE** ; ...
... **GLUTAMINE**
DESCRIPTORS:
ORGANISMS: **Mycobacterium** tuberculosis (Mycobacteriaceae)
CHEMICALS & BIOCHEMICALS: **GLUTAMINE SYNTHETASE** ; ...

... **GLUTAMINE**
MISCELLANEOUS TERMS: ...EXTRACELLULAR **GLUTAMINE SYNTHESIS** ;

7/3,K/6 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

05888998 EMBASE No: 1994302190
Glutamine synthetase **of** Mycobacterium **tuberculosis: Extracellular release and characterization of its enzymatic activity**
Harth G.; Clemens D.L.; **Horwitz M.A.**
Center for the Health Sciences, School of Medicine, University of California, 10833 Le Conte Avenue,Los Angeles, CA 90024 United States
Proceedings of the National Academy of Sciences of the United States of America (PROC. NATL. ACAD. SCI. U. S. A.) (United States) 1994, 91/20 (9342-9346)
CODEN: PNASA ISSN: 0027-8424
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Glutamine synthetase **of** Mycobacterium **tuberculosis: Extracellular release and characterization of its enzymatic activity**
Harth G.; Clemens D.L.; **Horwitz M.A.**

We have investigated the activity and extracellular release of **glutamine synthetase** (L-glutamate:ammonia ligase (ADP-forming), EC 6.3.1.2) of **Mycobacterium** tuberculosis. The purified, homogeneous M. tuberculosis **glutamine synthetase** appears to consist of 12 most likely identical subunits of M(r) 58,000, arranged in two superimposed hexagons. In the catalysis of L- **glutamine** , the enzyme has an apparent K(m) for L-glutamate of approx. eq.3 mM...

...releases the enzyme into its phagosome in infected human monocytes. Two potentially important roles for **glutamine synthetase** in the pathogenesis of M. tuberculosis infection are (i) the synthesis of L-**glutamine** , a major component of the cell wall of pathogenic but not nonpathogenic mycobacteria, and (ii...
DRUG DESCRIPTORS:
*glutamate ammonia ligase--endogenous compound--ec; * **glutamine** --endogenous compound--ec
MEDICAL DESCRIPTORS:
*enzyme activity; *enzyme release; * **mycobacterium** tuberculosis
...CAS REGISTRY NO.: 6899-04-3 (**glutamine**)
1994

7/3,K/7 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

07443946 Genuine Article#: 166KQ No. References: 28
Title: Export of recombinant Mycobacterium **tuberculosis superoxide dismutase is dependent upon both information in the protein and mycobacterial export machinery - A model for studying export of leaderless proteins by pathogenic mycobacteria**
Author(s): Harth G; **Horwitz MA (REPRINT)**
Corporate Source: UNIV CALIF LOS ANGELES,SCH MED, DEPT MED, DIV INFECT DIS, 10833 LE CONTE AVE/LOS ANGELES//CA/90095 (REPRINT); UNIV CALIF LOS ANGELES,SCH MED, DEPT MED, DIV INFECT DIS/LOS ANGELES//CA/90095
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, **1999** , V274, N7 (FEB 12), P 4281-4292
ISSN: 0021-9258 Publication date: 19990212
Publisher: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814
Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

Title: Export of recombinant Mycobacterium **tuberculosis superoxide dismutase is dependent upon both information in the protein and mycobacterial export machinery...**
Author(s): Harth G; **Horwitz MA (REPRINT)**
, **1999**
...Abstract: extracellular release of enzymatically active superoxide dismutase, one of the 10 major extracellular proteins of **Mycobacterium** tuberculosis, both in its native host and in the heterologous host **Mycobacterium** smegmatis, We found that the M, tuberculosis superoxide dismutase gene, encoding a leaderless polypeptide of...

...at a B-fold increased level under conditions of hydrogen peroxide stress. The highly pathogenic **mycobacterium** M. tuberculosis expresses 93-fold more superoxide dismutase than the nonpathogenic **mycobacterium** M. smegmatis, and it exports a much higher proportion of expressed enzyme (76 versus 21...
...Identifiers--ESCHERICHIA-COLI; **GLUTAMINE - SYNTHETASE** ; EXPRESSION; GENE; IDENTIFICATION; PHAGOCYTOSIS; RECEPTORS; SEQUENCE; ANTIGEN; RELEASE

7/3,K/8 (Item 1 from file: 440)
DIALOG(R)File 440:Current Contents Search(R)

13075717
ISSN: 0019-9567
JOURNAL: INFECTION AND IMMUNITY , **2001**
(TABLE OF CONTENTS RECORD)
(The Complete Table of Contents now Available in Format 19)

, **2001**

...101 REFERENCES

Section Heading: MOLECULAR PATHOGENESIS

P. 5967-5973. Silencing of oxidative stress response in **Mycobacterium** tuberculosis: Expression patterns of ahpC in virulent and avirulent strains and effect of ahpC inactivation...MD/20814. English.

ARTICLE. 64 REFERENCES. ABSTRACT AVAILABLE

P. 6348-6363. High extracellular levels of **Mycobacterium** tuberculosis **glutamine synthetase** and superoxide dismutase in actively growing cultures are due to high expression and extracellular stability rather than to a protein-specific export mechanism. Tullius MV; Harth G; **Horwitz MA.** Univ Calif Los Angeles, Div Infect Dis, CHS 37-121,10833 Le Conte Ave...02115. English. ARTICLE. 29 REFERENCES. ABSTRACT AVAILABLE

P. 6156-6164. Enhancement of innate immunity against **Mycobacterium** avium infection by immunostimulatory DNA is mediated by indoleamine 2,3-dioxygenase. Hayashi T; Rao...inhibitory molecules down-regulate the cytolytic activity of human CD4(+) T-cell clones specific for **Mycobacterium** tuberculosis. Merlo A; Saverino D; Tenca C; Grossi CE; Bruno S; Ciccone E. Univ Genoa...

7/3,K/9 (Item 2 from file: 440)
DIALOG(R)File 440:Current Contents Search(R)

11242977
ISSN: 0027-8424
JOURNAL: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA , **2000**
(TABLE OF CONTENTS RECORD)
(The Complete Table of Contents now Available in Format 19)

, **2000**

...College Pk//MD/20742. English. ARTICLE. 47 REFERENCES. ABSTRACT AVAILABLE

P. 418-423. Treatment of **Mycobacterium** tuberculosis with antisense oligonucleotides to **glutamine synthetase** mRNA inhibits **glut**amine synthetase activity, formation of the poly-L-glutamate/**glutamine** cell wall structure, and bacterial replication. Harth G; Zamecnik PC; Tang JY; Tabatadze D; **Horwitz MA.** Univ Calif Los Angeles, Sch Med, 37-121 CHS,10833 Conte Ave/Los Angeles...

7/3,K/10 (Item 3 from file: 440)
DIALOG(R)File 440:Current Contents Search(R)

10551256
ISSN: 0022-1007
JOURNAL: JOURNAL OF EXPERIMENTAL MEDICINE , **1999**
(TABLE OF CONTENTS RECORD)
(The Complete Table of Contents now Available in Format 19)

, **1999**

...South Africa/. English. ARTICLE. 41 REFERENCES. ABSTRACT AVAILABLE

P. 1425-1435. An inhibitor of exported **Mycobacterium** tuberculosis **glutamine synthetase** selectively blocks the growth of pathogenic mycobacteria in axenic culture and in human monocytes: Extracellular

proteins as potential novel drug targets. Harth G; **Horwitz MA.** Univ Calif Los Angeles, Dept Med, 37-121 CHS,10833 Le Conte Ave/Los ...

7/3,K/11 (Item 4 from file: 440)
DIALOG(R)File 440:Current Contents Search(R)

08796867
ISSN: 0021-9258
JOURNAL: JOURNAL OF BIOLOGICAL CHEMISTRY , **1997**
(TABLE OF CONTENTS RECORD)
(The Complete Table of Contents now Available in Format 19)

, **1997**

...P. 22728-22735. Expression and efficient export of enzymatically active **Mycobacterium** tuberculosis **glutamine synthetase** in **Mycobacterium** smegmatis and evidence that the information for export is contained within the protein. Harth G; **Horwitz MA.** UNIV CALIF LOS ANGELES,SCH MED, DEPT MED, DIV INFECT DIS, 10833 LE CONTE...P. 22875-22883. Characterization of rat liver-specific **methionine** adenosyltransferase gene promoter - Role of distal upstream cis-acting elements in the regulation of the...

7/3,K/12 (Item 5 from file: 440)
DIALOG(R)File 440:Current Contents Search(R)

08141401
ISSN: 0019-9567
JOURNAL: INFECTION AND IMMUNITY , **1997**
(TABLE OF CONTENTS RECORD)
(The Complete Table of Contents now Available in Format 19)

, **1997**

...P. 387-394. Analysis of culture filtrate and cell wall-associated antigens of **Mycobacterium** paratuberculosis with monoclonal antibodies. Mutharia LM; Moreno W; Raymond M. UNIV GUELPH,DEPT MICROBIOL/GUELPH...P. 587-596. Simultaneous prevention of **glutamine synthesis** and high-affinity transport attenuates Salmonella typhimurium virulence. Klose KE; Mekalanos JJ. HARVARD UNIV,SCH...P. 676-684. Induction of cytotoxic T-Cell responses against culture filtrate antigens in **Mycobacterium** bovis bacillus Calmette-Guerin-infected mice. Denis O; Lozes E; Huygen K. INST PASTEUR,LAB...

P. 692-698. Effects of **Mycobacterium** tuberculosis on the bioelectric properties of the alveolar epithelium. Zhang M; Kim KJ; Iyer DP. 767-773. **Mycobacterium** marinum causes both long-term subclinical infection and acute disease in the leopard frog (Rana...insights into the genetics, biochemistry, and immunocytochemistry of the 30-kilodalton major extracellular protein of **Mycobacterium** tuberculosis (vol 64, pg 3041, 1996). Harth G; Lee BY; Wang J; Clemens DL; **Horwitz MA.** UNIV CALIF LOS ANGELES,SCH MED, DEPT MED, DIV INFECT DIS/LOS ANGELES//CA...

7/3,K/13 **(Item 6 from file: 440)**
DIALOG(R)File 440:Current Contents Search(R)
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05801034
ISSN: 0027-8424
JOURNAL: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA , **1994**
(TABLE OF CONTENTS RECORD)
(The Complete Table of Contents now Available in Format 19)

, **1994**

...P. 9342-9346. **GLUTAMINE SYNTHETASE** OF **MYCOBACTERIUM** TUBERCULOSIS - EXTRACELLULAR RELEASE AND CHARACTERIZATION OF ITS ENZYMATIC ACTIVITY. HARTH G; CLEMENS DL; **HORWITZ MA.** UNIV CALIF LOS ANGELES,SCH MED,CTR HLTH SCI 37121,DEPT MED,DIV INFECT...

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S1       2529   AU=((HORWITZ, M?) OR (HORWITZ M?))
S2        443   S1 AND MYCOBACTERIUM
S3         82   S2 AND (METHIONINE OR SULFOXIMINE OR PHOSPHINOTHRICIN OR G-
               LUTAMINE)
S4          2   S3 AND ANTI(3N)BACTER?
S5         74   S3 AND (GLUTAMINE()SYNTH?)
S6         39   S5 AND PY<2002
S7         13   RD  (unique items)
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              74  S5
         4508739  PY=2002
      S8       6  S5 AND PY=2002
? rd
      S9       1  RD  (unique items)
? t s9/3,k/all
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9/3,K/1 **(Item 1 from file: 5)**
DIALOG(R)File 5:Biosis Previews(R)
(c) 2006 The Thomson Corporation. All rts. reserv.

0014097197 BIOSIS NO.: 200300055916
Targeting the Mycobacterium tuberculosis 30/32-kDa mycolyl transferase complex as a therapeutic strategy against tuberculosis: Proof of principle by using antisense technology.
AUTHOR: Harth Gunter; Horwitz Marcus A (Reprint); Tabatadze David; Zamecnik Paul C
AUTHOR ADDRESS: Division of Infectious Diseases, Department of Medicine, University of California, 10833 Le Conte Avenue, 37-121 Center for Health Sciences, School of Medicine, Los Angeles, CA, 90095, USA**USA
AUTHOR E-MAIL ADDRESS: mhorwitz@mednet.ucla.edu
JOURNAL: Proceedings of the National Academy of Sciences of the United States of America 99 (24): p15614-15619 November 26, 2002 **2002**
MEDIUM: print
ISSN: 0027-8424 _(ISSN print)
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

2002

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   $263.89  Estimated cost this search
   $278.33  Estimated total session cost  22.115 DialUnits

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Dialog level 05.12.03D

Last logoff:  17jul06 15:42:34
Logon file001 18jul06 14:15:14
           *** ANNOUNCEMENTS ***
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NEW FILES RELEASED
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***Regulatory Affairs Journals (File 183)
***Index Chemicus (File 302)
***Inspec (File 202)

RESUMED UPDATING
***File 141, Reader's Guide Abstracts
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***File 516, D&B--Dun's Market Identifiers
***File 523, D&B European Dun's Market Identifiers
***File 531, American Business Directory
*** MEDLINE has been reloaded with the 2006 MeSH (Files 154 & 155)
*** The 2005 reload of the CLAIMS files (Files 340, 341, 942)
is now available online.
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***File 468, Public Opinion Online (POLL)

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Data Report (F452), Prous Science Drugs of the Future (F453),
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Cost is in DialUnits
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Terminal set to DLINK
? sf all
>>>SELECT FILES not supported.
? b 411
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     $0.83  Estimated cost File1
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File 411:DIALINDEX(R)

DIALINDEX(R)
   (c) 2006 Dialog
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*** DIALINDEX search results display in an abbreviated ***
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   You have 562 files in your file list.
   (To see banners, use SHOW FILES command)
? s au=((horwitz, M?) or (Horwitz M?)

Your SELECT statement is:
   s au=((horwitz, M?) or (Horwitz M?)

          Items   File
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>>>Unmatched parentheses
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Your SELECT statement is:
   s au=((horwitz, M?) or (Horwitz M?))

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              7     2: INSPEC_1898-2006/Jul W2
            476     5: Biosis Previews(R)_1969-2006/Jul W2
              9     6: NTIS_1964-2006/Jul W2
             44     7: Social SciSearch(R)_1972-2006/Jul W2
              8     8: Ei Compendex(R)_1970-2006/Jul W2
             19    10: AGRICOLA_70-2006/May
             22    11: PsycINFO(R)_1887-2006/Apr W4
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              1    18: Gale Group F&S Index(R)_1988-2006/Jul 17
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            329    34: SciSearch(R) Cited Ref Sci_1990-2006/Jul W2
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              3    47: Gale Group Magazine DB(TM)_1959-2006/Jul 14
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              6    51: Food Sci.&Tech.Abs_1969-2006/Jul W3
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              1    61: Civil Engineering Abstracts._1966-2006/Jul
              1    62: SPIN(R)_1975-2006/Apr W3
              2    63: Transport Res(TRIS)_1970-2006/Jun
      Examined  50 files
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              1    66: GPO Mon. Cat._1978-2006/Jul
            170    71: ELSEVIER BIOBASE_1994-2006/Jul W3
            321    73: EMBASE_1974-2006/Jul 18
             39    88: Gale Group Business A.R.T.S._1976-2006/Jul 06
              1    89: GeoRef_1785-2006/Jul B1
              3    91: MANTIS(TM)_1880-2006/Jan
             21    98: General Sci Abs_1984-2005/Jan
              1    99: Wilson Appl. Sci & Tech Abs_1983-2006/Jun
              7   103: Energy SciTec_1974-2006/May B2
              1   111: TGG Natl.Newspaper Index(SM)_1979-2006/Jul 05
             92   120: U.S. Copyrights_1978-2006/Jul 11
      Examined 100 files
              3   136: BioEngineering Abstracts_1966-2006/May
             45   137: Book Review Index_1969-2004/May
              3   139: EconLit_1969-2006/Jul
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      4   142: Social Sciences Abstracts_1983-2006/Jun
     55   143: Biol. & Agric. Index_1983-2006/Jun
    266   144: Pascal_1973-2006/Jun W4
      4   148: Gale Group Trade & Industry DB_1976-2006/Jul 14
     10   149: TGG Health&Wellness DB(SM)_1976-2006/Jun W4
     37   150: Gale Group Legal Res Index(TM)_1980-2006/Jul 13
    386   155: MEDLINE(R)_1950-2006/Jul 17
     61   156: ToxFile_1965-2006/Jul W2
     90   159: Cancerlit_1975-2002/Oct
     44   162: Global Health_1983-2006/Jun
      1   163: Ageline(R)_1965-2006/Jun
      4   172: EMBASE Alert_2006/Jul 18
      2   173: Adis Clinical Trials Insight_2000-2006/Jul W1
      1   174: Pharm-line(R)_1978-2002/Dec W3
      3   203: AGRIS_1974-2006/Mar
      2   205: ONTAP(R) BIOSIS  Previews(R)_
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      3   211: Gale Group Newsearch(TM)_2006/Jul 14
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     10   266: FEDRIP_2005/Dec
      1   272: ONTAP(R) EMBASE_
      1   280: ONTAP Derwent World Patents Index
Examined 200 files
      2   285: BioBusiness(R)_1985-1998/Aug W1
      2   315: ChemEng & Biotec Abs_1970-2006/Jun
     35   340: CLAIMS(R)/US Patent_1950-06/Jul 13
     28   342: Derwent Patents Citation Indx_1978-05/200643
     25   345: Inpadoc/Fam.& Legal Stat_1968-2006/UD=200628
      1   347: JAPIO_Dec 1976-2005/Dec(Updated 060404)
     15   348: EUROPEAN PATENTS_1978-2006/ 200628
     17   349: PCT FULLTEXT_1979-2006/UB=20060713,UT=20060706
     26   357: Derwent Biotech Res.__1982-2006/Jul W2
      2   358: Current BioTech Abs_1983-2006/Jan
      1   370: Science_1996-1999/Jul W3
      9   373: Adis Clinical Trials Insight_1982-June 2000
     12   376: Derwent Drug File_1964-1982
Examined 250 files
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    288   399: CA SEARCH(R)_1967-2006/UD=14504
    117   420: UnCover_1988-2001/May 31
     25   426: LCMARC-Books_1968-2006/Jul W3
      5   430: British Books in Print_2006/Jul W3
    125   434: SciSearch(R) Cited Ref Sci_1974-1989/Dec
      2   436: Humanities Abs_1984-2004/Dec
      3   437: Education Abstracts_1983-2006/Jun
      1   438: Library Lit. & Info. Science_1984-2006/Jun
      4   439: Arts&Humanities Search(R)_1980-2006/Jul W2
    482   440: Current Contents Search(R)_1990-2006/Jul 18
      1   444: New England Journal of Med._1985-2006/Jul W1
Examined 300 files
      7   474: New York Times Abs_1969-2006/Jul 17
      6   483: Newspaper Abs Daily_1986-2006/Jul 13
     29   484: Periodical Abs Plustext_1986-2006/Jul W2
     22   485: Accounting & Tax DB_1971-2006/Jul W2
Examined 350 files
      3   553: Wilson Bus. Abs._1982-2006/Jul
>>>File 581: Truncation not allowed on floating point data
>>>File 581: SELECT not processed for this file.
Examined 400 files
```

229

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 NEWS  1           Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2           "Ask CAS" for self-help around the clock
 NEWS  3  FEB 27   New STN AnaVist pricing effective March 1, 2006
 NEWS  4  APR 04   STN AnaVist $500 visualization usage credit offered
 NEWS  5  MAY 10   CA/CAplus enhanced with 1900-1906 U.S. patent records
 NEWS  6  MAY 11   KOREAPAT updates resume
 NEWS  7  MAY 19   Derwent World Patents Index to be reloaded and enhanced
 NEWS  8  MAY 30   IPC 8 Rolled-up Core codes added to CA/CAplus and
                   USPATFULL/USPAT2
 NEWS  9  MAY 30   The F-Term thesaurus is now available in CA/CAplus
 NEWS 10  JUN 02   The first reclassification of IPC codes now complete in
                   INPADOC
 NEWS 11  JUN 26   TULSA/TULSA2 reloaded and enhanced with new search and
                   and display fields
 NEWS 12  JUN 28   Price changes in full-text patent databases EPFULL and PCTFULL
 NEWS 13  JUl 07   Coverage of Research Disclosure reinstated in DWPI
 NEWS 14  JUl 11   CHEMSAFE reloaded and enhanced
 NEWS 15  JUl 14   FSTA enhanced with Japanese patents

 NEWS EXPRESS  JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
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 NEWS IPC8     For general information regarding STN implementation of IPC 8
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FILE 'HOME' ENTERED AT 09:25:20 ON 18 JUL 2006

=> FIL CAPLUS
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       1.47       1.47

FILE 'CAPLUS' ENTERED AT 09:29:26 ON 18 JUL 2006
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229

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FILE COVERS 1907 - 18 Jul 2006 VOL 145 ISS 4
FILE LAST UPDATED: 17 Jul 2006 (20060717/ED)

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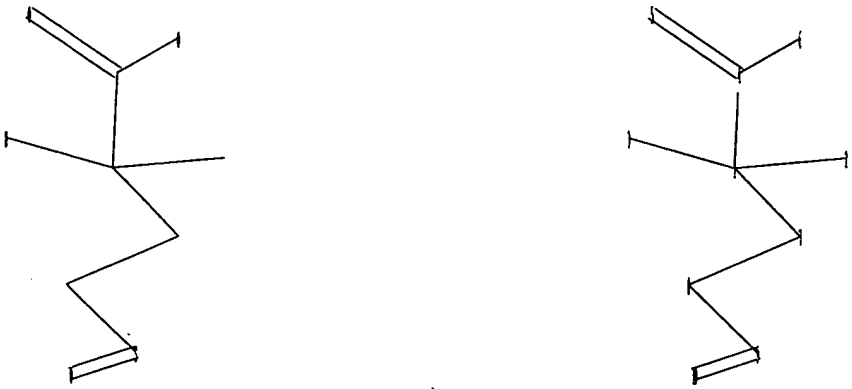
Uploading C:\Program Files\Stnexp\Queries\10715679.str



chain nodes :
1 2 3 4 5 6 7 8 9 10
chain bonds :
1-2 1-3 1-4 1-7 4-5 4-6 7-8 8-9 9-10
exact/norm bonds :
1-3 4-5 4-6 8-9 9-10
exact bonds :
1-2 1-4 1-7 7-8

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS

L1 STRUCTURE UPLOADED

=> s l1
REG1stRY INITIATED
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SAMPLE SEARCH INITIATED 09:30:08 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -       12 TO ITERATE

100.0% PROCESSED       12 ITERATIONS                                 4 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:           33 TO      447
PROJECTED ANSWERS:               4 TO      200

L2             4 SEA SSS SAM L1


L3             5 L2

=> DIS L3 1 SAM IBIB IABS
THE ESTIMATED COST FOR THIS REQUEST IS 3.07 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L3   ANSWER 1 OF 5  CAPLUS  COPYRIGHT 2006 ACS on STN
CC   80-4 (Organic Analytical Chemistry)
TI   Gas chromatographic separation of enantiomeric sulfur compounds on
     Chirasil-Val
ST   sulfoxide enantiomer gas chromatog; sulfur compd enantiomer gas chromatog
IT   Chromatography, gas
        (for resolution of enantiomeric sulfur compds. on Chirasil-Val)
IT   Resolution
        (of sulfur compound enantiomers by gas chromatog. on Chirasil-Val)
IT   Sulfoxides
     RL: ANST (Analytical study)
        (resolution of enantiomeric, gas chromatog.)
IT   4170-69-8   33577-16-1   95833-61-7   95833-62-8
     RL: ANST (Analytical study); PROC (Process)
        (resolution of, by gas chromatog. on Chirasil-Val)
IT   3226-66-2   7314-32-1   23631-84-7   34044-66-1   41486-92-4   50896-97-4
     50896-98-5   80225-50-9 95833-63-9   95833-64-0   95833-65-1
     95833-66-2   95833-67-3   95833-68-4   95833-69-5   95833-70-8
     95833-71-9   95833-72-0   95833-73-1   95833-74-2
     RL: ANST (Analytical study); PROC (Process)
        (separation of, by gas chromatog. on Chirasil-Val)
ACCESSION NUMBER:        1985:178450  CAPLUS
DOCUMENT NUMBER:         102:178450
TITLE:                   Gas chromatographic separation of enantiomeric sulfur
                         compounds on Chirasil-Val
AUTHOR(S):               Bayer, Ernst; Kuesters, Ernst; Nicholson, Graeme J.;
                         Frank, Hartmut
CORPORATE SOURCE:        Inst. Org. Chem., Univ. Tuebingen, Tuebingen,
                         D-7400/1, Fed. Rep. Ger.
SOURCE:                  Journal of Chromatography (1985), 320(2), 393-6
                         CODEN: JOCRAM; ISSN: 0021-9673
DOCUMENT TYPE:           Journal
LANGUAGE:                English
ABSTRACT:
The gas chromatog. separation of sulfoxide antipodes, including aliphatic
sulfoxides,
on quartz fused silica capillaries coated with the chiral silicone phase
```

Chirasil-Val is reported. The compds. were esterified before anal. A flame ionization detector and H carrier gas were used.

=> DIS L3 2 SAM IBIB IABS
THE ESTIMATED COST FOR THIS REQUEST IS 3.07 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L3 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
CC 34-2 (Synthesis of Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 22
TI Chemical ionization mass spectra of L-methionine and L-methionine analogs
ST methionine analog mass spectra; sulfone methionine mass spectra; sulfoxide methionine mass spectra; sulfoximine methionine mass spectra
IT Amino acids, properties
RL: PRP (Properties)
(mass spectra of methionine and its sulfone and sulfoxide and sulfoximines)
IT Mass spectra
(chemical-ionization, of methionine and its analogs)
IT Molecular structure-property relationship
(mass spectra, of methionine and its sulfone and sulfoxide and sulfoximines)
IT 63-68-3, properties 3226-65-1 7314-32-1 15985-39-4 78867-97-7 78867-98-8 78867-99-9 78868-00-5 78868-01-6 78868-02-7
RL: PRP (Properties)
(chemical ionization mass spectrum of)
ACCESSION NUMBER: 1981:515972 CAPLUS
DOCUMENT NUMBER: 95:115972
TITLE: Chemical ionization mass spectra of L-methionine and L-methionine analogs
AUTHOR(S): Cooper, Arthur J. L.; Griffith, Owen W.; Meister, Alton; Field, Frank H.
CORPORATE SOURCE: Med. Coll., Cornell Univ. Med. Coll., New York, NY, 10021, USA
SOURCE: Biomedical Mass Spectrometry (1981), 8(3), 95-8
CODEN: BMSYAL; ISSN: 0306-042X
DOCUMENT TYPE: Journal
LANGUAGE: English
ABSTRACT:
The chemical ionization mass spectra of L-methionine, L-methionine sulfone, L-methionine (RS)-sulfoxide, L-methionine (RS)-sulfoximine, DL-ethionine (RS)-sulfoximine, DL-prothionine (RS)-sulfoximine, DL-buthionine (RS)-sulfoximine, α-methyl-L-methionine (RS)-sulfoximine, α-ethyl-DL-methionine were recorded. The observed fragmentation patterns are discussed in relation to structural and chemical properties; the sulfoximines show spectra unique among amino acids.

=> DIS L3 3 SAM IBIB IABS
THE ESTIMATED COST FOR THIS REQUEST IS 3.07 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L3 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
CC 7-3 (Enzymes)
Section cross-reference(s): 13
TI Inhibitors of polyamine biosynthesis. 9. Effects of S-adenosyl-L-methionine analogs on mammalian aminopropyltransferases in vitro and polyamine biosynthesis in transformed lymphocytes
ST aminopropyltransferase interaction adenosylmethionine analog; synthase spermine spermidine adenosylmethionine analog; decarboxylase inhibition

adenosylmethionine analog; DNA formation lymphocyte adenosylmethionine analog; polyamine lymphocyte adenosylmethionine analog

IT Lymphocyte
(DNA formation by and polyamine levels in, adenosylmethionine analog effect on)

IT Liver, composition
(adenosylmethionine decarboxylase of, adenosylmethionine analog inhibition of)

IT Deoxyribonucleic acids
RL: FORM (Formation, nonpreparative)
(formation of, by lymphocytes, adenosylmethionine analog effect on)

IT Prostate gland
(spermidine and spermine synthases of, adenosylmethionine analog interaction with)

IT Brain, composition
(spermine synthase of, adenosylmethionine analog interaction with)

IT Amines, biological studies
RL: BIOL (Biological study)
(poly-, of lymphocyte, adenosine methionine analog effect on)

IT 74812-43-4
RL: BIOL (Biological study)
(adenosylmethionine analog interaction with, of brain and prostate gland)

IT 37277-82-0
RL: BIOL (Biological study)
(adenosylmethionine analog interaction with, of prostate gland)

IT 9036-20-8
RL: PROC (Process)
(inhibition of, of liver, by adenosylmethionine analog)

IT 61102-32-7 72648-30-7 72648-32-9 72648-35-2 72648-37-4 76858-87-2 76858-88-3
RL: BIOL (Biological study)
(spermidine and spermine synthases interaction with)

ACCESSION NUMBER: 1981:170089 CAPLUS
DOCUMENT NUMBER: 94:170089
TITLE: Inhibitors of polyamine biosynthesis. 9. Effects of S-adenosyl-L-methionine analogs on mammalian aminopropyltransferases in vitro and polyamine biosynthesis in transformed lymphocytes
AUTHOR(S): Pankaskie, Marvin C.; Abdel-Monem, Mahmoud M.; Raina, Aarne; Wang, Tinchung; Foker, John E.
CORPORATE SOURCE: Dep. Med. Chem., Univ. Minnesota, Minneapolis, MN, 55455, USA
SOURCE: Journal of Medicinal Chemistry (1981), 24(5), 549-53
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
ABSTRACT:
Seven analogs of S-adenosyl-L-methionine were studied as inhibitors or substrates for mammalian spermidine synthase (SDS) and spermine synthase (SS). One of these, S-(5'-deoxy-5'-adenosyl)-(±)-1-methyl-3-(methylthio)propylamine (I), showed a unique spectrum of activities on the polyamine biosynthesis enzymes. It was an inhibitor of adenosylmethionine decarboxylase from rat liver and SS from bovine brain and rat ventral prostate. I was a substrate for the SDS from bovine brain and rat ventral prostate, but not a substrate for the SS from these same sources. At concns. of ≥0.2 mM, I blocked the increases in polyamine levels and in thymidine-3H incorporation induced by concanavalin A in cultured mouse lymphocytes. At approx. 0.5 mM concentration of I, the cellular polyamine levels and the rate of thymidine incorporation were similar to those of the unstimulated lymphocytes. Lower concns. of I (0.02-0.1 mM) produced a dose-dependent increase in thymidine incorporation. A dose-dependent decrease in the cellular polyamine levels was observed in the range of 0.05-0.5 mM of the inhibitor. Thus the

effects of I on transformed lymphocytes are complex and may not be solely due to the inhibition of polyamine biosynthesis by this compound

=> DIS L3 4 SAM IBIB IABS
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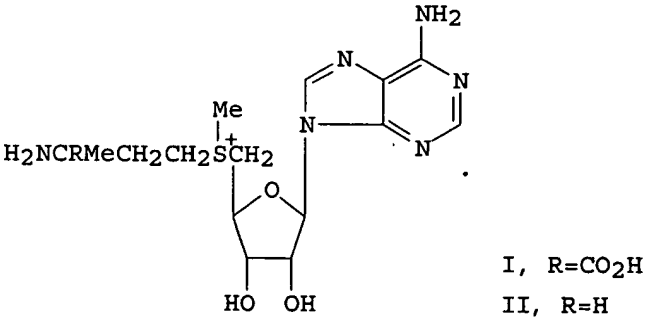
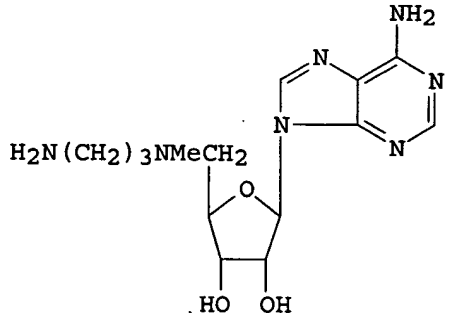
L3 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
CC 7-3 (Enzymes)
TI Inhibitors of polyamine biosynthesis. 8. Irreversible inhibition of mammalian S-adenosyl-L-methionine decarboxylase by substrate analogs
ST adenosylmethionine decarboxylase inhibitor substrate; adenosylmethionine analog enzyme inhibitor
IT Liver, composition
(adenosylmethionine decarboxylase of, adenosylmethionine analogs inhibition of)
IT Michaelis constant
(of adenosylmethionine decarboxylase)
IT Kinetics, enzymic
(of inhibition, of adenosylmethionine decarboxylase)
IT 72648-29-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(acid hydrolysis of)
IT 72648-22-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrolysis of)
IT 9036-20-8
RL: PROC (Process)
(of liver, inhibition of, by adenosylmethionine analogs)
IT 19360-96-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and Bucherer-Lieb reaction of)
IT 61102-32-7P 72648-25-0P 72648-31-8P 72648-34-1P 72648-36-3P 72648-37-4P 72648-38-5P 72671-97-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and adenosylmethionine decarboxylase inhibiting activity of)
IT 72648-21-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis of)
IT 19361-15-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with isopropylidenesulfonyladenosine)
IT 72648-27-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with isopropylidenetoluenesulfonyladenosine)
IT 72648-26-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reduction of)
IT 100-53-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with Me vinyl ketone)
IT 29908-03-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with adenosylmethionine decarboxylase, kinetics of)
IT 5605-63-0
RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with amino(benzylthio)methylbutanoic acid)
IT 78-94-4, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with benzylmercaptan)
IT 5135-30-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with methylalaninenitrile)
IT 693-05-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with toluenesulfonyladenosine)

ACCESSION NUMBER: 1980:71732 CAPLUS
DOCUMENT NUMBER: 92:71732
TITLE: Inhibitors of polyamine biosynthesis. 8. Irreversible inhibition of mammalian S-adenosyl-L-methionine decarboxylase by substrate analogs
AUTHOR(S): Pankaskie, Marvin; Abdel-Monem, Mahmoud M.
CORPORATE SOURCE: Coll. Pharm., Univ. Minnesota, Minneapolis, MN, 55455, USA
SOURCE: Journal of Medicinal Chemistry (1980), 23(2), 121-7
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
GRAPHIC IMAGE:



I, R=CO_2H
II, R=H



III

ABSTRACT:
Several S-adenosyl-L-methionine analogs in which the sulfonium group and the substituents of the α-C of the amino acid moiety were modified were synthesized and evaluated as inhibitors of S-adenosyl-L-methionine decarboxylase of rat liver. S-(5'-Deoxy-5'-adenosyl)-(±)-2-methylmethionine dihydrogen sulfate (I), the propylamine analog (II), and N-(aminopropyl)-N-methyl-5'-amino-5'-deoxyadenosine-2HCl (III) were competitive inhibitors of the enzymic decarboxylation of S-adenosyl-L-methionine by the rat liver enzyme. I

and II formed azomethine bonds with an essential CO group in the enzyme active site, and both inhibitors also caused a concentration- and time-dependent inactivation
of the enzyme. III did not form an azomethine bond with and did not cause inactivation of the enzyme. Apparently, I and II have a binding mode to the enzyme active site different than that for III.

=> DIS L3 5 SAM IBIB IABS
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L3 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
IC C07C
CC 23-17 (Aliphatic Compounds)
Section cross-reference(s): 25, 27
TI Carboxylic acids
ST ester isocyano; arom ester isocyano; furanpropionate isocyano; addn isocyano ester alkene
IT Esters, preparation
RL: PREP (Preparation)
(isocyano)
IT Addition reaction
(of isocyano esters with vinylic compds.)
IT 78-94-4 94-41-7 102-96-5 107-13-1, reactions 126-98-7 3156-70-5 4360-47-8 4786-20-3 4812-23-1 5535-48-8 33972-66-6 33972-68-8 41409-84-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(addition reaction of, with isocyano alkanoates)
IT 2999-46-4 33140-27-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(addition reaction of, with vinyl compds.)
IT 38062-11-2P 38062-12-3P 38062-13-4P 38062-14-5P 38062-15-6P 38062-16-7P 38062-17-8P 38114-92-0P 41409-70-5P 41409-74-9P 41409-75-0P 41409-76-1P 41409-77-2P 41409-78-3P 41409-79-4P 41409-80-7P 41409-81-8P 41409-82-9P 41409-83-0P 41486-62-8P 41694-57-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
ACCESSION NUMBER: 1973:441967 CAPLUS
DOCUMENT NUMBER: 79:41967
TITLE: Carboxylic acids
INVENTOR(S): Schoellkipf, Ulrich; Stafforst, Diethard
PATENT ASSIGNEE(S): Badische Anilin- & Soda-Fabrik AG
SOURCE: Ger. Offen., 19 pp. Addn. to Ger. Offen. 2,043,666 (CA 75;129661u).
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
DE 2147707	A1	19730329	DE 1971-2147707		19710924
PRIORITY APPLN. INFO.:			DE 1971-2147707	A	19710924

GRAPHIC IMAGE: For diagram(s), see printed CA Issue.
ABSTRACT:
Addition reaction of isocyanoesters CNCHRCO2Et (R = H, Me) with acrylonitrile, vinyl sulfones, nitroalkanes, or vinyl ketones in presence of NaOMe, BuLi, or Na-EtOH gave other esters (mono- and diaddn. products). Thus, NCCHMeCO2Et (I) and PhCH:CHCN gave NCCH2CHPhC(NC)MeCO2Et; I with 2,5-dihydro-3-

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(methylsulfonyl)furan gave II; and CNCH2CO2Et with PhCH:CHNO2 gave (O2NCH2CHPh)2C(NC)CO2Et.

=> FIL REGISTRY

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	17.19	19.56

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CA SUBSCRIBER PRICE	-3.75	-3.75

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=> FIL CAPLUS

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FULL ESTIMATED COST	0.44	20.00

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CA SUBSCRIBER PRICE	0.00	-3.75

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FILE COVERS 1907 - 18 Jul 2006 VOL 145 ISS 4
FILE LAST UPDATED: 17 Jul 2006 (20060717/ED)

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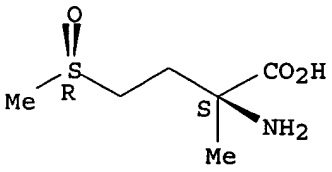
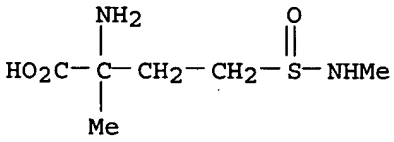
L3 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
IT 95833-63-9
RL: ANST (Analytical study); PROC (Process)
(separation of, by gas chromatog. on Chirasil-Val)
RN 95833-63-9 CAPLUS
CN L-Isovaline, 4-(methylsulfinyl)-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> DIS L3 2 HITSEQ
THE ESTIMATED COST FOR THIS REQUEST IS 7.05 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L3 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
IT 78868-00-5
RL: PRP (Properties)
(chemical ionization mass spectrum of)
RN 78868-00-5 CAPLUS
CN Isovaline, 4-[(methylamino)sulfinyl]- (9CI) (CA INDEX NAME)

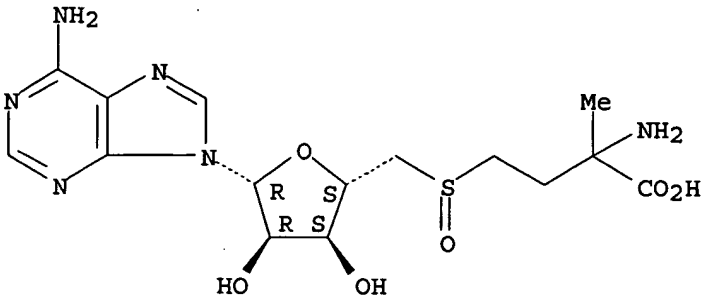


=> DIS L3 3 HITSEQ
THE ESTIMATED COST FOR THIS REQUEST IS 7.05 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L3 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
IT 72648-37-4
RL: BIOL (Biological study)
(spermidine and spermine synthases interaction with)
RN 72648-37-4 CAPLUS
CN Adenosine, 5'-[(3-amino-3-carboxybutyl)sulfinyl]-5'-deoxy- (9CI) (CA

INDEX NAME)

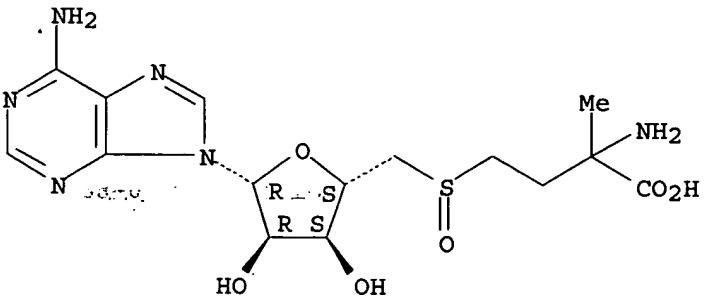
Absolute stereochemistry.



=> DIS L3 4 HITSEQ
THE ESTIMATED COST FOR THIS REQUEST IS 7.05 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

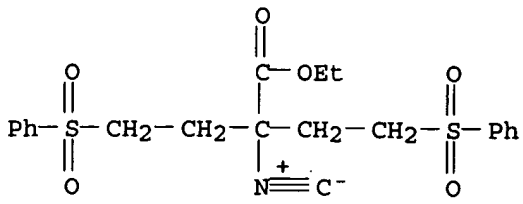
L3 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
IT 72648-37-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and adenosylmethionine decarboxylase inhibiting activity of)
RN 72648-37-4 CAPLUS
CN Adenosine, 5'-[(3-amino-3-carboxybutyl)sulfinyl]-5'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> DIS L3 5 HITSEQ
THE ESTIMATED COST FOR THIS REQUEST IS 7.05 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L3 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
IT 41409-75-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 41409-75-0 CAPLUS
CN Butanoic acid, 2-isocyano-4-(phenylsulfonyl)-2-[2-(phenylsulfonyl)ethyl]-, ethyl ester (9CI) (CA INDEX NAME)



=> FIL REGISTRY

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	12.77	32.77

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-3.75

FILE 'REGISTRY' ENTERED AT 09:33:35 ON 18 JUL 2006

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 17 JUL 2006 HIGHEST RN 893880-40-5
DICTIONARY FILE UPDATES: 17 JUL 2006 HIGHEST RN 893880-40-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=> DIS L2 1- RN SAM
'SAM' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

REG - RN
SAM - Index Name, MF, and structure - no RN
FIDE - All substance data, except sequence data
IDE - FIDE, but only 50 names
SQIDE - IDE, plus sequence data
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used
SQD - Protein sequence data, includes RN
SQD3 - Same as SQD, but 3-letter amino acid codes are used

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SQN - Protein sequence name information, includes RN

CALC - Table of calculated properties
EPROP - Table of experimental properties
PROP - EPROP and CALC

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ABS -- Abstract
APPS -- Application and Priority Information
BIB -- CA Accession Number, plus Bibliographic Data
CAN -- CA Accession Number
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)
IND -- Index Data
IPC -- International Patent Classification
PATS -- PI, SO
STD -- BIB, IPC, and NCL

IABS -- ABS, indented, with text labels
IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.
The MAX format is the same as ALL.
The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.
HELP FORMATS -- To see detailed descriptions of the predefined formats.
ENTER DISPLAY FORMAT (IDE):END

=> DIS L2 1- RN SAM
'SAM' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

REG - RN
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FIDE - All substance data, except sequence data
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SQD - Protein sequence data, includes RN
SQD3 - Same as SQD, but 3-letter amino acid codes are used
SQN - Protein sequence name information, includes RN

CALC - Table of calculated properties

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EPROP - Table of experimental properties
PROP - EPROP and CALC

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IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

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OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.
The MAX format is the same as ALL.
The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

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HELP FORMATS -- To see detailed descriptions of the predefined formats.
ENTER DISPLAY FORMAT (IDE):END

=> D COST

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
CONNECT CHARGES	0.76	5.37
NETWORK CHARGES	0.12	1.08
DISPLAY CHARGES	0.00	27.20
FULL ESTIMATED COST	0.88	33.65

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-3.75

IN FILE 'REGISTRY' AT 09:34:48 ON 18 JUL 2006

=> FIL STNGUIDE

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.88	33.65

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION

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CA SUBSCRIBER PRICE 0.00 -3.75

FILE 'STNGUIDE' ENTERED AT 09:35:02 ON 18 JUL 2006
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jul 17, 2006 (20060717/UP).

=> logoff
ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF
LOGOFF? (Y)/N/HOLD:y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.06	33.71

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-3.75

STN INTERNATIONAL LOGOFF AT 09:35:32 ON 18 JUL 2006